Modernism and Professionalism in American Architecture, 1919-1933

Volume One of Two

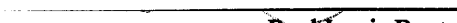by

Paul Louis Bentel

A.B., Harvard College
1979

M.Arch, Graduate School of Design,
Harvard University,
1982

SUBMITTED TO THE DEPARTMENT OF ARCHITECTURE
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY
IN THE FIELD OF
ARCHITECTURE, ART AND ENVIRONMENTAL STUDIES
AT THE
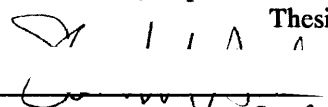MASSACHUSETTS INSTITUTE OF TECHNOLOGY
FEBRUARY 1993

Signature of the Author

Paul Louis Bentel
Department of Architecture
October 9, 1992

Certified by

V ꓘ   Stanford Anderson
Professor of History and Architecture
Head, Department of Architecture
Thesis Supervisor

Accepted by

Stanford Anderson
Chairman
Departmental Committee on Graduate Studies

Idealism and Enterprise: Modernism and Professionalism in American Architecture 1919-1933

by

Paul Louis Bentel

ABSTRACT

This dissertation examines the dominant conventions of architectural practice in the United States between 1919 and 1933. It proceeds from two assumptions: first, that by the 1900s, both the American Institute of Architects (AIA) and the numerous professional journals available to architects across the country solidified the profession nationally and yielded a coherent field within which practitioners could debate the content of their professional service; second, that within the context of its national discourse, the architecture profession drew inspiration for its effort to identify a social function for itself from the White City Movement which forged a link between the architect and a national political, industrial and cultural leadership drawn together by American Progressivism. The study focuses on the period following the demise of the White City Movement during which American architects cast off their allegiance to its traditional aesthetic formulae but retained the aspiration to associate themselves and their work with prevailing trends in a national political and social milieu. It demonstrates that in their efforts to redefine the terms of their professional service, American architects invoked the popular terminology of Scientific Management, Technocracy, Fordism, and the nostrums of the 'New Era' and promised 'efficiency' in their work and in the industries they presumed to manage. It reveals that within these efforts of professional redefinition, the professional ideology supporting the architect's aspirations for work converged with a modernist idealism espousing the value of technical expertise as a medium of social emancipation and progress. By giving evidence of a widespread and indigenous modernism that perceived a social benefit in the architect's capacity to utilize industrial technology, this project amends the dominant historical view which attributes the re-emergence of an American Modern Movement in the 1930s to the 'diaspora' of European artists and intellectuals before to WW II.

This study has two parts. In Part One, it examines first the canons of Beaux-Arts Classicism and their gradual dissolution after World War I under the pressure of criticism from writers such as Ralph Adams Cram, Louis Sullivan and Lewis Mumford and through the work of the AIA's Post-War Committee; and second, the institutional structure of the AIA and its organizational ideologies in the 1920s. In Part Two, it looks more closely at the evolving conventions of professional service, demonstrating that American architects reached a consensus about the necessity of a 'new' architecture which identified itself in three areas: first, in its rejection of the Beaux-Arts method of interpreting a building program through a stylistic rendition of its social 'character' in favor of design strategies that maximized usable space; second, in its abandonment of the visual paradigm of the White City in favor of the expansionist rhetoric of Regional Planning; and third, in its disavowal of stylistic conventions based on historical precedent in favor of styles that both demonstrated a discontinuity with the past and celebrated an evolving consumerist 'utopia' populated by industrial commodities.

> Thesis Supervisor: Stanford Anderson
> Title: Head, Department of Architecture; Professor of History and Architecture

Paul Louis Bentel

22 Buckram Road
Locust Valley, New York 11560

b. 6/13/57

Education

PhD
Dissertation: "Idealism and Enterprise: Modernism and
Professionalism in American Modern Architecture,
1919-1933."
History, Theory and Criticism Program
Department of Architecture
Massachusetts Institute of Technology
September 1992

NCARB Registration
New York State
June 1983

Master of Architecture
Graduate School of Design
Harvard University
June 1982

Special Studies
Architekturabteilung
Eidgenossische Technische Hochschule
Zuerich CH
1981

Bachelor of Arts   -
Harvard College
June 1979

Academic Honors

Graduate Tuition Award
History of Architecture
Massachusetts Institute of Technology
1983, 1984

AIA Medal
Graduate School of Design
Harvard University
June 1983

Langley Prize for Outstanding Academic Achievement
AIA Foundation Fellowship
Graduate School of Design
Harvard University
1981-82

Graham Foundation Grant
Graduate School of Design
Harvard University
1981

David McCord Scholarship
for the Advancement of the Arts
Harvard College
June 1979

National Trust for Historic Preservation
Summer Intern Grant
1978

Trustees Scholarship for Highest Academic
Achievement
Harvard College
1978

Professional Affiliations

American Institute of Architects
Member

New York State Association of Architects
Member

Long Island Chapter of American Institute of
Architects
Member

Society of Architectural Historians
Member

A.I.A. National Committee on Design
Member

Recent Publications

Paul Bentel, The Chrysler Building (Princeton
Architectural Press: forthcoming).

_____, "The Regional Plan of New York." in
Joann Krieg, ed., Long Island Architecture (NY: 1990),
pp.12-32.

_____, "Long Island: A Review of the Built
Environment," Podium (September 1988): pp. 3-4.

_____, "The Re-examination of Modern Architecture: A Review of Modernism in America, 1937-1943: A Catalog and Exhibition of Four Architectural Competitions," Places (Winter 1985): p.43-53.

_____, "Background Paper for Aga Kahn Conference in Kuala Lumpur on High Density Urban Development," (August, 1985).

_____ and Lynn Hopffgarten, eds., "Monumentality and the City," Harvard Architecture Review, 4 (Spring 1984).

_____, "Reply to Moshe Safdie; The Cultural Value of Historical Precedent," GSD Bulletin (Spring 1982).

Margaret Gaskie, "Saint Joseph College Library," Architectural Record (November 1991).

New England School of Art and Design, Chair. Sculpture and Painting by Paul Bentel and Don Shaffer (Boston: 1987).

Public Lectures (partial listing)

"Modernism in America: The Chicago Century of Progress Exposition, 1933,"
Faculty Lecture Series, Fine Arts Department
Harvard University
1991

"Architectural Practice in the United States, 1919-1932"
in "Issues in 20th c Architecture," organized by
Professor Eduard Sekler
Harvard University
1990

"Regional Plan of New York,"
Long Island Architecture Conference
Hofstra University
1989

"American Architecture,"
Faculty Lecture Series
Eidgenossische Technische Hochschule
1987

"The Work of Harvey Wiley Corbett at the Chicago Century of Progress International Exposition, 1933,"
Buell Center
Columbia University
1986

"Modern Urbanism, 1925-1933: Two Projects or the American City by Raymond Hood and Harvey Wiley Corbett,"
AIA Student Chapter Convention, New York
Fall 1985

"Some Sources of American Modern Design: The Century of Progress Exposition, Chicago, 1933,"
Society of Architectural Historians Student
Conference, Boston
March 23, 1985

Teaching Experience

Harvard University,
Department of Fine Arts
Lecturer, 19th and 20th c Architecture and Urbanism
1990-91

Eidgenossische Technische Hochschule
Architecture Department
Director, American Studies Program, Providence, R.I.
1988-90

Eidgenossische Technische Hochschule
Architecture Department
Assistant Professor
1987-88

Massachusetts Institute of Technology
Lecturer, 20th c American Architecture
1986

Visiting Design Critic at Massachusetts Institute of Technology, Harvard University, Rhode Island School of Design, Georgia Institute of Technology, New York Institute of Technology, Boston Architectural Center
1982-91

Acknowledgements

Table of Contents

Volume One

Part I

Part II

List of Abbreviations

AA	American Architect
ACSA	Association of Collegiate Schools of Architecture
AD	Architectural Design
AR	Architectural Record
Arch	Architecture
ASHSB	Architects' Small House Service Bureau
AF	Architectural Forum
AIAJ	Journal of the American Institute of Architects
AIA	American Institute of Architects
AIA RG 510	Executive Committee Minutes, Record Group 510, Archives of American Institute of Architects, AIA Headquarters, Washington D.C.
BAID	Beaux-Arts Institute of Design
CBI	Congress of Building Industries
CPIE	Century of Progress International Exposition
CT	Chicago Tribune
FAES	Federated American Engineering Societies
JSAH	Journal of the Society of Architectural Historians
NCARB	National Council of Architectural Registration Boards
NYT	New York Times
PA	Progressive Architecture
PP	Pencil Points
SBAA	Society of Beaux-Arts Architects
UIC CPIE	Century of Progress International Exposition Collection, Archive of Univeristy of Illinois at Chicago

Introduction

This is a study of the changing conventions of architectural practice in the United States following World War I. It seeks both to explain the gradual demise of academic eclecticism and to identify the roots of an American modern movement in the 1920s. Moreover, it purports to revise the dominant historical interpretation which has described the global economic depression following 1929 and the 'diaspora' of European artists and architects in the 1930s as the primary catalysts for change in American aesthetic canons. It examines, therefore, the professional discourse in the decade after the war for evidence of a cogent and indigenous modern movement that can account for the transition in the patterns of thinking evident among American architects.

As a revisionist project, this study also sets itself against a common historical pretext evident in the work of those who attempt to depict the modern movement as an intellectual monolith, as a body of knowledge complete in itself, autonomous and separated from other professional concerns. Instead, it advances the argument that the modern movement was contingent and polemical, and seeks to demonstrate that in the United States the desire for a 'new' architecture emerged from the same professional discourse in which practitioners seeking social status and security determined ways to defend their work. Therefore, it proposes that the American modern movement can best be understood as a distinct set of ideas which was nevertheless synthetic and complex, comprised of the overlapping ideologies of modernism and professionalism from which it acquired its direction and its sense of urgency.

In attempting to map the ideological terrain formed by the convergence of modernism and professionalism in the 1920s, it is significant that their form and content were frequently indistinguishable. In the United States, modernists and professional ideologists were united, for example, by an overarching sense that the growth of industrial technology was irrevocable. Moreover, they took comfort in the inevitability of the historical role of industrial capitalism, the one prizing it as a force for change and the other convinced that it held the key to a professional destiny. Thus, they shared a common preoccupation with its utility, a feeling derived less from

their belief in its accuracy as a medium through which to achieve specific social ends than from the simple realization of its power and a pure excitement over the promise of its instrumentality.

Among American modernists, this position in particular revealed an ambivalence that would be amplified within the professional discourse and which would later infuse the modern movement. Throughout the twentieth century, modernists espousing social idealism and advocating social reform condemned the distinctions of class caused by the monopolization of capital, the imbalanced relationships between supply and demand brought on by unregulated production and the resulting political discord which characterized the American social scene. Simultaneously, they envisioned a rationalized industrial economy which guaranteed a more equitable distribution of its products and which avoided over-production. They hoped, in other words, to improve society by enhancing the power of industry to produce and distribute its goods. But, in supporting this reform strategy they confronted a persistent dilemma of American liberalism, proposing the development of the very same productive forces and economic institutions that produced the social structure precipitating their discontent.

Within the architectural discourse, modernism manifested itself in a similarly conflicted aspiration for social reform. Since World War I, ideologues of the modern movement have characterized theirs as a quest for a 'utopia' populated by well-functioning and economical buildings produced by an efficient construction industry. In order to procure their utopia, architects eagerly cultivated their own abilities to apply new technologies to the building process and more efficient strategies of spatial enclosure to the design process. But, as they immersed themselves in the effort to achieve greater efficiency in building production they became part of industry, working for its expansion and taking guidance from the logic of its processes. The more involved they became in industrial activities the more they relinquished their capacity to employ industrial production as the medium of social emancipation they proclaimed it to be.

In the 1920s, American architects superimposed this modernist ideology on the professional discourse in which they considered the social status of their work. Within the context of that discourse, sincere modernists proclaiming a commitment to an industrial utopia shared a

terminology describing the architect's 'service' to society with professional ideologues

contemplating the value of the architect's work. Advocating industrial efficiency, modernists made

the expressions of their social idealism available to practitioners seeking a legitimizing rhetoric for

their efforts to increase the marketability of their work: architects forged a distinct professional

agenda which conflated their ability to perform a 'social service' by invigorating industrial

production with their service to an existing industrial leadership whose aspirations for efficiency

grew out of a desire to maximize the capital-forming potential of industry. Thus, the merging of

modernism and professionalism exacerbated the modernist ambivalence for industrial capitalism

by riveting the attention of architects on its instrumentality -- and on their ability to enhance its

performance -- while exempting its social product from criticism.

By the 1950s the persistence of this obsession with industrial production and the economic

institutions of capitalism produced a disenchantment even among the staunchest supporters of a

modern movement. In Space Time Architecture (Cambridge, MA 1941), Siegfried Giedion had

portrayed artists and architects as individuals whose capacities to comprehend the "constituent

facts" of an era such as its unique forms of technology allowed them to transcend conventional

modes of thinking and creating and thus to lay the basis for social change. Yet, in Mechanization

Takes Command (New York, 1948) published several years later, Giedion recanted, expressing his

disbelief in the ability of modern man to direct industrial production to ends of his own choosing.

He described the dilemma of modernism as a conflict between the "belief in progress" and the

"faith in production" by which it was sometimes displaced. "In the time of full mechanization," he

wrote in Mechanization Takes Command, "faith in production penetrated every class and

ramification of life, thrusting all other considerations into the background."[1]

Giedion's disenchantment had special significance to the American discourse for it was in

this country that he first offered his polemical support and later expressed a remorse for the

direction taken by modern architects. It is also significant that in the context of an American

---

[1] On Giedion's use of these terms see Kenneth Frampton, "Giedion in America: Reflections in a Mirror," in
Dimitri Porphyrios, ed., On the Methodology of Architectural History (New York, 1981), pp. 45-51. Frampton also notes
that Giedion's preoccupation with "production for production's sake" is the historian's first acknowledgement of an
"ideology" of industrial production at work in the modern movement.

15

discourse, Giedion's disenchantment was not novel. Thirty years earlier, Lewis Mumford had identified a similar conflict between social progress and the growth of technology leading to the expansion of industry. Mumford preceded Giedion in his concern for a lopsided technological and industrial capacity that he predicted would be debilitating to the modernist project of social emancipation. Whereas Giedion criticized the collapse of idealism into myopic pragmatism, Mumford identified a uniquely American pragmatism that seemed to pre-empt the emergence of a well-formed and humane social idealism.

The origins of Mumford's criticism lie in the period before World War I in the intellectual disaffection for Progressivism and its ineffective strategies for cultural reform. His modernism grew out of an effort to recapture a dynamic model of personal emancipation that would lead, he surmised, to a form of resistance to the encompassing institutions of corporate capitalism without abandoning the beneficence of industry and its productive technologies. His critique grew more insistent in the wake of the war which had left the United States, in contrast to Europe, with a dynamic and effective industrial base, with large amounts of uncommitted capital and with conditions that favored the immediate emergence of a consumer culture. Within the context of these forces of change, Mumford perceived both a unique opportunity and a great urgency to institute reforms in the political and cultural practices which had dominated in the United States since the turn of the century. Among American architectural critics, he voiced the strongest dissent against the form which modernism had taken within the professional discourse,

But the same political and economic reorganization that inspired Mumford to believe in the possibility of success for his reform strategies sustained ideologies of industrial utopianism that both encompassed and absorbed Mumford's work. In the 1920s, the distinctions between 'social progress' and 'industrial production' later observed by Giedion were concealed by a modernist rhetoric that merged themes of social emancipation with the aspiration to increase industrial productivity. Moreover, among architects the grand social aspirations of modernism were conflated with their own efforts to establish and reinforce the value of their knowledge and expertise. Thus, the American modern movement grew out of and perpetuated an ideology set

against itself, advocating social change while espousing a mode of action that enhanced the authority of the status quo and depicting a utopian imagery that sustained the rhetoric of professional 'service.' Oscillating between 'idealism' and 'enterprise,' the professional discourse in the 1920s gave evidence of the symptoms of ambiguity and self-negation that would later offend Siegfried Giedion and other advocates of the modern movement.

Within the last ten years it has been fashionable to dwell on the unscientific nature of the modern movement, a characteristic which has made it vulnerable to the misappropriation of its most basic tenets. Like Mumford and Giedion before them, post-modernist critics chastise adherants of the modern movement for their inability to discern between social idealists seeking profound change and ideologists contriving rhetorical strategies with which to popularize industrial expansion. In light of this criticism it is instructive to note that the ideological content of the modern movement was a consequence - in part - of the discursive process out of which it was formed. As with those exchanges among architects which we witness in the present, the professional discourse in the 1920s was inclusive and rambling. Riveted in a social context, victimized by special interests and transparent, metaphorically speaking, to contemporary events as well as dominant and popular trends of thinking, the professional discourse produced, as a matter of course, a body of knowledge that was tendentious and ideological.

Viewed from this perspective we can observe that within the 1920s, three aspects of the historical condition were pre-eminent in setting the context for the professional discourse and determining, more or less, the reference points for an emerging body of knowledge. First, one notices that in the first half of the twentieth century American capitalism reached a unique phase in its development, a phase in which the complex demands of industrial expansion brought about greater differentiations of work. Between worker and capitalist there now arose a new 'class' of technical expert to which the architect aspired to belong. No longer merely the procurer of culture for the upper class, architects expressed a desire to participate directly in the process of industrial expansion. Second, inspired by the dominant political ideology after World War I -- an ideology

colored equally by Technocracy, Associationism, Fordism and the political philosophies of the

'New Era' promulgated by Calvin Coolidge and Herbert Hoover -- architects began to imagine

themselves as the deliverers of the fruits of industrial production to the American people. Third,

prompted by the growth of institutions in industry and government, architects sought a new form of

professional association that allowed them to participate more forcefully in the transformation of

those industrial sectors in which they were involved. Let us consider these conditions in greater

detail:

The 'Professional' Consciousness: Architects as Agents of Industrial Expansion

Classical Marxism describes how capitalism constantly transcends itself. It explains, for

example, that in its early phases monopoly capitalism emerged out of and surpassed free market

capitalism, a process carried out by capitalists fulfilling their historical roles by simultaneously

increasing the productive power of society and their control of production. It also predicts that

increases of productive power make the tasks of controlling and further expanding industrial

technology more difficult and complicated.[2]

In the early twentieth century, modern science held out the promise of new, more

productive technologies and pointed toward a rationalization of productive processes, both human

and mechanical. However, the implementation of science -- its transformation into viable

industrial technologies -- demanded a new 'agent,' one familiar with science and industry who was

able to apply his knowledge to the task of increasing industrial output.[3] Recently, historians of

science and industry such as David Noble have described a scenario in which capitalists enlisted the

help of individuals whose technical skills and knowledge augmented their own arsenal of economic

and political tools in "the struggle for capital accumulation and the demand for ever more potent

and profitable means of production."[4] Such historical observations are frequently reinforced by the

words expressed by the historical personalities that writers like Noble have examined: for example,

---

[2] G.A. Cohen, Karl Marx's Theory of History (Princeton, NJ, 1978), p. 201.

[3] David Noble, America by Design: Science, Technology and the Rise of Corporate Capitalism (New York 1977), p. xxiii.

[4] Ibid., p. xix.

in 1923 Henry Ford articulated the aspirations of his peers among the American industrial leadership when he proclaimed that what were needed were "masters in industrial method." The circumstances of the industrialist in the 1920s demanded, he continued, "those who can mold the political, social, industrial and moral mass into a sound and shapely whole."[5]

The rising demand for technical experts capable of managing industrial production marked the advent of a new phase in the development of industrial capitalism, and their presence introduced a new bias in the social fabric as well. In coordinating labor, improving productivity by implementing better technology in production, streamlining distribution, and seeking out ways to increase consumption, the manager defined the dominant modes of production. Managers were, in the words of Ford, "artists in industrial relationship," seeking a perfect balance between labor, capital, supply and demand. Figuratively speaking, they became the new protagonists in the development of industrial capitalism, taking over the limelight from 'captains of industry' such as Ford whose own historical persona gradually receded into the more ambiguous corporation.

Managers differed from capitalists in significant ways. For example, they did not own the modes of production which they managed. Political theorists of the early twentieth century such as Thorstein Veblen observed that the manager or technical expert was unable to own the productive processes he controlled and conjectured that this detachment provided them with an ability to act independently and forcefully. Dedicated to the task of expanding industry rather than a desire to accumulate profit, managers and technical experts could concentrate their activities on achieving greater efficiencies in production. Thus, managers might be capable, Veblen surmised, of liberating American society from the brute determinism of the profit motive.[6]

But, recent attempts by sociologists to define more accurately the nature of this 'new class' have noted its inability to transcend the social patterns of capitalism. Veblen would be dismayed (although not surprised) to see that the knowledge and skill which was to supply his "Soviet of Technicians" with its emancipatory powers has become the basis of a new form of capital which Alvin Gouldner calls "cultural capital." The "new class," Gouldner notes, owns both the technical

[5] Henry Ford, My Life and Work (Garden City, NY, 1923), p. 104.

[6] Thorstein Veblen, The Engineers and the Price System (New York, 1933).

knowledge of industrial processes and the management skills necessary to control men at work. In their performance of services for the capitalist, managers seek to capitalize their own skill and knowledge.[7]

This distinct form of capital ownership displayed similarities to that of a 'petty bourgeoisie.'[8] The 'new class' owned its own labor power but did not own the labor power of others.[9] The actions of its members were closely linked to their desire to capitalize their knowledge and skill, increasing the value of their service to the capitalist.[10] Despite Veblen's hope, members of the 'new class' were unable to play a liberatory role without jeopardizing the value of their own knowledge and skill and thus unwilling to act out any revolutionary role.[11]

In the 1920s American architects attempted to participate as agents of capitalists, seeking ways in which they could align their work with the agenda voiced by Ford of expanding industrial production and artfully linking it to the methods of distribution and the demands of a marketplace. They took inspiration from the gradual industrialization of construction especially after World War I which suggested new ways in which they might involve themselves in the construction industry. They also considered new ways of utilizing architecture as a medium of industrial expansion, proposing that their services could aid in enhancing the investment value of real estate and that architectural design could function as a component of advertising by inspiring and sustaining consumption.

---

[7] Alvin Gouldner, The Future of Intellectuals and the Rise of the New Class (New York, 1979), p. 15. On the nature and consequences of the 'capitalization' of knowledge among professionals see also Barbara and John Ehrenreich, "The Professional Managerial Class," Radical America (March-April 1977). As an example of the implications of this view for historical methods see Noble, pp. xvii-xxvi ff. As an example of a history of professionalization in a field related to architecture in which the efforts to maximize the economic value of professional knowledge were depicted as set against the professional's sense of 'social responsibility' see Edwin Layton, The Revolt of the Engineers: Social Responsibility and the American Engineering Professions (Baltimore, 1986). On sociological models applied to the architecture profession see Magali Larsen, The Rise of Professionalism: A Sociological Analysis, (Berkeley, CA, 1977); and Sibel Dostoglu, "Towards Professional Legitimacy and Power" (Ph.D. diss., University of Pennsylvania, 1982), pp. 18-34.

[8] Dostoglu, p. 21.
[9] Cohen, p. 86.
[10] Gouldner, p. 15.
[11] As Veblen himself wrote, "by settled habit the technicians, the engineers, and industrial experts, are a harmless and docile sort, well fed on the whole, and somewhat placidly content with the "full dinner pail" which the lieutenants of the Vested Interests habitually allow them." Veblen, p. 135.

Professional Role Models: Architects in the 'New Era'

An important aspect of the modernist impulse was the desire to regulate industrial capitalism. The modernist did not desire to eliminate capitalism but rather to reform and control the social forces it engendered. Reformers assumed a variety of programs for their work. In the late nineteenth century, American Progressivism offered cultural reform in a loosely coordinated movement to improve artistic, intellectual, and social life as a means of releasing the tensions caused by the monopolization of capital and class antagonism. But, cultural reform, as its critics noted, mistook form for substance and proposed "cultural solutions for political problems."[12] Change in American cultural life, critics observed, would have to be preceded by a more fundamental reorganization of American economic and political structure.

In 1909 Herbert Croly, later a prominent editor of Architectural Record, published The Promise of American Life in which he called for governmental intervention in the methods of American business and initiated a new stage in the Progressive agenda. Croly spelled out the rationality of industrial regulation: without regulation, he argued, free enterprise would inevitably deteriorate into a rigid and restricting network of monopolies limiting competition. Simultaneously, Croly sought higher industrial productivity as a means of achieving a new social reality characterized by a plenitude of goods and services mechanically replenished and immune to the threat of exhaustion that plagued the natural resources. Thus, he set the Progressive agenda, "hovering between the desire to break up the monopolies and restore laissez-faire on the one hand, and the need to make corporate capitalism function more effectively on the other."[13]

World War I and the activities of Woodrow Wilson's administration ushered in an era of governmental intervention that also favored enhancements to corporate capitalism. Wilson pinned his hopes on 'Voluntarism,' the basis of his 'New Freedom' programs, which emerged from his conviction that industrial managers would themselves see the benefits of limited controls on profit-taking and would voluntarily submit to the determinations of special governmentally-sanctioned

---

[12] Christopher Lasch quoted in Richard Pells, Radical Visions and American Dreams (Middletown, CN, 1973), p. 8.
[13] Pells, p. 9.

21

commissions designed to oversee specific sectors of American industry. Wilson's strategy was put

to the test during the war. The War Industries Board and the National War Labor Board were two

examples of agencies of the government which provided a clearinghouse for information and a

tribunal of last resort to resolve labor disputes. As a result of the great success of these programs,

the war was perceived by many Americans to have been beneficial, introducing an age of self-

restraint on the part of industrial management and labor and of success at maintaining a

rationalized balance of supply and demand.

While Wilsonians retreated from the methods of governmental regulation instituted

during the war, some aspects of Wilsonian Voluntarism persisted in the Republican

administrations of Warren Harding and Calvin Coolidge. The 'New Era' which they professed to

have initiated was more appealing to business leaders than had been the earlier manifestations of

corporate and industrial reform because it promised to place more control in the hands of

industrial managers. Writing in Architectural Record in 1925, Herbert Croly noted the change:

> American business has less to fear from political agitation than at any
> time for twenty years. Beginning with the election of Mr. Roosevelt to the
> Presidency in 1904, business during the following sixteen years suffered from
> political attacks and hazards. Throughout much of this time the atmosphere in
> Washington was inimical to some of its methods and, particularly in the case of
> large corporations, it had to submit to systematic espionage and stringent
> regulation....
>   During the last year all these impediments to business expansion have
> been partly or wholly removed. Business is now being carried on in a political
> atmosphere more encouraging than at any time since the reign of McKinley....The
> Republican party is apparently established securely in power for many years and
> has recently purged itself of its insurgent and unruly members. President
> Coolidge is perfectly frank about his intention of carrying on the government of
> the country in the interest of its business men. On the headlines of his program is
> the reduction of federal taxation particularly for the purpose of relieving the
> larger incomes. Whatever the administration can do to promote business
> expansion, it will do and it can undoubtedly do a great deal. It will look with
> satisfaction rather than suspicion at the tendency towards cooperative
> organization among business men and within limits, it will not oppose a revival of
> the tendency to consolidation which the anti-trust agitation of twenty years ago
> unfortunately brought to an end.[14]

One of the most significant contributors to this political ideal was Herbert Hoover, an

engineer who had coordinated the European food distribution programs under Wilson during the

---

[14] Herbert Croly, "A New Era of Building," AR 58 (September 1925): p. 289. Croly went on to say that this would open up an "orgy" of construction.

war and who took office as Secretary of Commerce under Harding in 1921.[15] Hoover transformed

the Commerce Department into a clearinghouse for information and an instigator of 'cooperative

organization.' Among the most significant aspects of Hoover's agenda was the rekindling of the

trade association, organized meetings of experts in a variety of fields and industries who assembled

to discuss a particular aspect of the production and distribution strategies they employed and how

they might be improved.[16] As a political program, 'Trade Associationism,' encouraged the

formation of a kind of "private government" (sometimes called an "adhocracy"), giving industrial

managers and key government officials the ability to formulate their own industrial policy.[17]

Hoover believed that by reviewing the processes of production and exchange, time and

energy savings could improve production efficiency and thereby lower costs. Lowered costs of

production could, if regulated by managers who were disinterested in exorbitant profits, be applied

toward reducing prices.[18] This, in turn, increased the effective buying power of American workers

making them potentially better consumers of industrially produced goods. Their consumption

would unleash, Hoover suggested, an upward spiral of economic growth leading to greater

---

[15] On the changes in Hoover's political outlook accounting for his success within both the Democratic and Republican parties see Gary Best, The Politics of American Individualism: Herbert Hoover in Transition, 1918-1921 (Westport, CN, 1975), p. 103.

[16] On Hoover's tenure as Secretary of Commerce see Herbert Hoover, The Memoirs of Herbert Hoover, vol. II, The Cabinet and the Presidency, 1920-1933 (New York, 1952); William Barber, From New Era to New Deal: Herbert Hoover, the Economists, and American Economic Policy, 1921-1933 (New York, 1985); Joan Hoff Wilson, Herbert Hoover: The Forgotten Progressive (Boston, 1975); Ellis Hawley, ed., Herbert Hoover as Secretary of Commerce: Studies in New Era Thought and Practice (Iowa City, 1981); Ellis Hawley, "Herbert Hoover, the Commerce Secretariat and the Vision of an Associative State, 1921-1928," Journal of American History LXI (June 1974-March 1975): pp. 116-140. See also Gabriel Kolko, Main Currents in Modern American History (New York, 1976), pp. 102-112.

[17] Hawley, "Herbert Hoover," p. 134; On the history of trade associations in the United States see Jerry Israel, ed., Building the Organizational Society: Essays on Associational Activities in Modern America (New York, 1972). See also the exemplary work of Louis Galambos. Competition and Cooperation: The Emergence of a National Trade Association (Baltimore, 1966). Hawley notes that Hoover was plagued by a fundamental contradiction in his programs: he was a "bureaucratic expansionist" who advocated decreasing the size of the federal bureaucracy. Hoover was also plagued in his efforts to expand the role of his department by opposition from other governmental agencies protecting their jurisdictional territory. Trade associationism itself was challenged numerous times during Hoover's eight years as Commerce Secretary as being a governmentally sanctioned form of cartel. However, the legality of the trade association was upheld in the courts and Hoover successfully sponsored many exchanges geared toward the elimination of "waste" in industry and the formation of what we might today call a coherent industrial policy.

[18] In 1921, for example, the report issued by Woodrow Wilson's Presidential Conference on Unemployment chaired by Hoover recommended that manufacturers reduce prices on their products as a means of spurring demand and increasing the opportunities for work. The committee also criticized the persistent tendency of American industrialists to lower wages as a means of offsetting the losses to profits that they suffered in periods of economic downturn.

affluence as well as a greater dispersion of industrial commodities.[19] By planning growth, regulating profits, and timing governmentally-sponsored work to bolster the national economy in periods of slackness, the New Era reforms proposed by Hoover promised to eliminate labor unrest as well as unproductive swings between inflation and depression.[20]

In articulating these policies, Hoover described them not merely as a program of industrial and economic reform but as vehicles to a new social condition: he foresaw a world that was free of class antagonism, immune to economic depression and characterized by both higher standards of living and the psychic fulfillment of affluent consumers confronting generous commodity markets. This industrial utopianism was conveyed years after his chairmanship of the Commerce Department had ended in a description he gave of his programs to increase industrial efficiency nationally and to speed the post-war recovery that appeared in his memoirs. "Reconstruction and economic progress and therefore most social progress," he wrote, "required as a first step lowering of costs of production and distribution by scientific research and transformation of its discoveries into labor-saving devices and new articles of use." He continued in his description of his post-war plan, noting,

> ...that we must constantly eliminate industrial waste; that we must increase the
> skill of our workers and managers; that we must assure that these reductions in
> cost were passed on to consumers in lower prices; that to do this we must
> maintain a competitive system; that with lower prices the people could buy more

---

[19] This was a recurring theme in New Era policies. See Hoover, Memoirs, p. 28.

[20] Government's role, according to Hoover, was to conduct research into management techniques, provide intellectual leadership and prohibit abuses of power according to Hoover. George Soule has suggested that the American economic system which Hoover helped to construct collapsed violently in the late 1920s precisely because of the failure of managers to distribute cost savings generated by new, labor-saving technologies to American workers in the form of higher wages or lower prices. He noted further that the profit motive became the leitmotif of all activities in the era especially because of the pro-business stance of the Harding and Coolidge administrations. George Soule, Prosperity Decade (New York, 1947), p. 331. As chairman of the Federated American Engineering Societies in 1920, Hoover authorized a report on "Waste In Industry." The purpose of the study was to determine through careful analysis of industrial production where significant savings could be achieved with which to carry out the post-war reconstruction. The final report suggested that 25% of the cost of normal American industrial production could be eliminated through better planning of processes without a reduction in wages or an increase of hours for the workers. The wastes outlined were: 1) failure to conserve resources; 2) strikes and lockouts; 3) failure to keep machines up to date; 4) undue intermittent employment in seasonal tasks (such as construction); 5) trade union limits on efforts by workers to produce more jobs; 6) waste in transportation; 7) waste in unnecessary variety of articles used in manufacture; 8) lack of standards in non-aesthetic commodities (commodities which need satisfy only performance criteria and do not rely on aesthetic differentiation for their marketing); 9) lack of cooperation between employees and labor; 10) failure to develop water resources. With the exception of the last of these, each of Hoover's points had an immediate relevance within the construction industry. See Hoover, Memoirs, p. 28; Edwin Layton, Revolt of the Engineers, pp. 193-4.

goods and thereby create more jobs at higher real wages, more new enterprises and constantly higher standards of living.[21]

Hoover placed great faith in the selfless commitment to rationality of professionals with technical expertise and believed in their ability to guide industry toward a model of action that would lead to the new social condition he envisioned. As an engineer whose effective administration of the food relief efforts during the war were widely heralded in the 1920s, Hoover personified the leadership traits he most admired, demonstrating a capability of looking beyond the immediate rewards of profit toward the larger issues of productivity and effective distribution. Both his popularity and the appeal of his credo manifested themselves as a broadly dispersed support for the notion of industrial planning and for the 'technical experts,' 'engineers,' and industrial 'managers' through whose agency Americans thought they could achieve a new social reality.

The emphasis on industrial efficiency, the careful consideration of profit, and the new sensitivity to the importance of consumers were components of Fordism and Technocracy, two movements which were influential in the twenties and which expanded the popular base for acceptance of Hoover's brand of reform. Ford's decision to introduce higher wages for his workers, a tactic employed in part to encourage his employees to endure the physical strain of assembly-line work, was heralded as a milestone in industrial planning because it recognized the necessity of worker loyalty and of increasing the workers' capacity to consume.[22] Among industrial leaders, Ford's example reinforced the growing conviction that the worker/consumer comprised a new constituency, making up that group whose involvement was necessary in order both to produce industrial goods and buy them. The emphasis on the working class inspired an awareness among managers -- architects included -- that the success of their efforts to increase the capital-forming potential of industry hinged on their ability to inspire and satisfy a desire for industrial commodities among this class. This circumstance encouraged a new perception of workers as constituting a 'mass client,' and precipitated a change in the efforts of industrial managers to

---

[21] Hoover, Memoirs, p. 28.

[22] See, for example, David Hounshell, From the American System to Mass-Production, 1800-1932 (Baltimore, 1984), p. 11.

control American labor which led them away from their characteristic paternalism and use of forceful authority toward a solicitous posture intended to appeal to prospective consumers.[23]

Over the eight years of Hoover's tenure as Secretary of Commerce through the administrations of Harding and Coolidge and through his own administration between 1928 and 1932, architects were called on frequently to contribute to Hoover's campaigns against "Waste in Industry." This set the tone for architectural practice in fundamental ways, acclimatizing architects to their roles as experts and managers and focusing their attentions on a new definition of "service" which emphasized the rationalization of industrial production and service to a 'mass clientele.'

The Professional Organization

Judged by its institutional forms, the American architectural profession was mature by the 1920s insofar as there was a distinct and well-recognized academic program by which individuals often prepared themselves for careers, there were standardized fee schedules, a movement to institute licensing requirements, and a coordinated group of professional organizations headed by the American Institute of Architects which functioned on a national level. Despite this institutional presence, however, the profession experienced numerous changes in the conditions of its working environment over which it could not exert a great deal of control. The professional institutions provided a different order of stability, functioning to facilitate the adaptation of practitioners to new conditions of work and to the constant threat of intrusion by those possessing other types of expertise into the terrain of service delineated by the architecture profession. Thus, the organizations and the programs they initiated and carried out constituted an important medium of transformation in the conventions of professional practice.

Both the growth in size of industrial corporations and the expansion of the governmental bureaucracy were symptomatic, in the early twentieth century, of the growing anonymity of American political and economic leadership. Wilson's war boards, staffed by legions of experts who had come to Washington to coordinate the massive industrial machine, were characteristic

---

[23] Dostoglu, p. 62.

rather than anomalous within an evolving productive network whose managerial requirements were becoming increasingly complex. In this context, the professional organizations representing architects carried out important roles as mediators between the practitioner and the impersonal networks of authority in which they operated.

In the wake of World War I, the circumstances of professional anonymity worsened both because of the centralization of control in the federal government and because of a dramatic decrease in the work opportunities for architects. As a result, the role of the AIA, in particular, grew as it turned its attention to a reformation of the architects' conventions of practice attuned now to the expectations for work in the post-war environment. For the first time, the AIA leadership, one drawn from the ranks of lesser-known professionals, took the lead in proposing new strategies of improving architectural service, suggesting, for example, that architects change the standard fee structure and seeking to render more efficient the exchange of information between materials manufacturers and professionals.

As the Institute expanded and grew more comprehensive in its representation of the professional, it exerted its own influence over the demeanor of the architect. Through its consolidated activities in Washington D.C., its publications, its conventions and its controls over professional documents outlining the code of ethics or its contracts, the AIA was especially important in forging a national consensus on practice. And, insofar as the AIA represented the single largest and most representative professional organization, it was through its directives and communications with members that the results of the professional discourse were disseminated.

Within this period, the AIA leadership drew its inspiration from the emerging political ideologies advanced by individuals such as Hoover, embraced the role model of the 'professional expert' and identified a new category of work opportunities existing within the institutional networks of business and industry rather than among the ranks of its leaders. Thus, much of the AIA's work revolved around the goal of solidifying the architect's role as an expert in the construction industry and improving his technical knowledge and expertise. Those leaders cemented this package of initiatives together with the rhetoric of "professional service," declaring,

as had Hoover, that social ends would be served by rational and technically knowledgeable industrial management.

The focus of this work is not merely the ideas which constituted the professional mentality in the 1930's. It also examines a field of knowledge produced out of the discursive exchanges between a diverse group including architects, architectural critics, historians, journalists, and others who shared ideas and opinions about the design of buildings in the 1920s. This subject matter presents special methodological problems. In particular, in its multivalence, the professional discourse resists a simple narrative reconstruction. I have chosen instead to divide this study thematically, by examining the work and words of similar individuals from different perspectives and as parts of diverse intellectual constellations. This is particularly the case in Part Two where several projects make repeat appearance. Of these, the Chicago Century of Progress International Exposition of 1933 is most significant and came to represent a kind of temporal 'touchstone.'

It has also been my intention to trace a professional discourse whose impact was most profound among practitioners. Therefore, I have chosen as source material those texts which were most accessible and most widely read by architects between 1919 and 1925. These include several books most notably those of Lewis Mumford. Primarily, however, the material is taken from professional magazines. Within the pages of Architectural Record, American Architect, Pencil Points, Architectural Forum, and especially the Journal of the American Institute of Architects, one finds that material with which the practicing architect was most familiar. We can be sure that this printed matter was intended for practicing architects. As theory, it cannot be taken as a comprehensive and systematic body of thought in most cases. However, the articles which appear in these magazines represent better than any other material the "warp of desire and the woof of reality" which formed the professional consciousness during this period.

As with all works of this scope, many of its insights were inspired by the work of others. Indeed, there has been a certain eclecticism in my preparation which is, I believe, appropriate to this material and germane to the task of forging a synthetic historical view combining political and

social perspectives with what is frequently regarded as strictly 'cultural' or 'art' history. Nevertheless, several texts loom larger than others. Although this is not in any strict sense a "Marxist" history, the notion that industrial capitalism operates as a primary historical force is constant throughout. This perspective has been reinforced in my work by the writings of Americanists such as David Noble and Stuart Ewen whose description of a "second industrial revolution" occurring at the end of the nineteenth and the beginning of the twentieth century reinforced my conviction in the correctness of a search into a period which for architectural historians has been regarded as lackluster. Related to these depictions of the historical background of the period is the work of Edwin Layton, especially his book, The Revolt of the Engineers (Baltimore, 1971), and of the re-examinations of Herbert Hoover and his 'Associative State' by Ellis Hawley, Joan Hoff Wilson and William Barber among others. I have relied heavily on the characterizations by Alvin Gouldner of the historical behavior of the professional and, in the case of the architect specifically, of Magali Larsen. While I regard their views of the operation of professional self-interests as excessively mechanical, their work offers a potent model. In the area of American architecture, I feel an indebtedness to Giorgio Ciucci, Francesco Dal Co, Mario Maniera-Elia, and Manfredo Tafuri whose essays on the American city are seminal both in their methodological format and as historical interpretations. In this sense too, the more recent work of M. Christine Boyer on city planning has provided both a resource and a model in its accounting of the dynamic process by which a field of knowledge related to architecture is produced. Inspirational -- though flawed by an excessive pessimism -- has been Tafuri's book, Architecture and Utopia: Design and Capitalist Development (Cambridge, MA, 1979) which, more than any other work, set the direction for this project.[24] On the topic of American architecture in the 1920s there have been few comprehensive historical texts since the dissertation of Walter Creese completed in 1949. Even then, Creese advised in his introduction that such a re-examination as this would be necessary to evaluate properly the content of the American modern movement. Thus, after forty years my work continues his own. Finally, in practically every phase of this project I

---

[24] First published as Manfredo Tafuri, Progetto e Utopia (Bari, 1973).

confronted the critical and historical writings of Lewis Mumford which manifest themselves twice, both as the subject and as an example for my work. My pleasure in re-reading his early texts was diminished only by a persistent remorse at seeing the substance of his ideas ignored by his contemporaries.

The following study has two parts. In the first section we will examine the context of the architectural discourse, hoping to recover some sense of both its diversity and of the selective criteria by which some ideas emerged as parts of a dominant ideology after World War I. We will first consider the professional discourse and then examine in greater detail the evolution of the professional institutions, especially the AIA, as a response to conditions of work that architects perceived. In the second part we will examine more closely those conventions of practice and methodologies of design that did emerge and consider their relationship back to a professional discourse, looking, in particular, at the willingness of architects to design in ways that were intended to 'streamline' building production, that projected urban images which maximized the development potential of the city and that used style as an iconographic system which helped in the task of socializing the working class, acclimatizing them to the new phenomenon of consumerism.

Chapter One: The Emergence of a Modern Movement in the Professional Discourse, 1910 - 1925

The Modernist Movement may have been prompted by the critic and launched by the artist or craftsman as the result of the stupid overdosing of the traditional and the classic; but the economic and industrial circumstances surrounding the launching immediately gave direction to the movement and defined the goal.[1]

Frederick Ackerman (1928)

In the first decade of the twentieth century, American architecture entered into a phase described by various historians as a 'golden era' and a moment of 'American renaissance.'[2] Between 1900 and 1910, American architects expressed a sense of self-confidence and a conviction in their conventions of practice: well educated, their ideas popularized by the burgeoning 'White City Movement,' they revelled in the authority conveyed to them by patrons among an emerging class of industrial and political leaders eager for them to envision a grand and aesthetically consistent national architecture. Yet starting around 1910, practitioners began to experience a gradual degradation in this support. A changing political mood altered the complexion of their patronage and shifted its attention away from the architectural program of monumentality. Popular support also withdrew from the aestheticized and historicist urban visions which architects had offered as models of city planning. Both the nature and scope of this retrenchment were apparent in 1909 at the First National Conference on City Planning when the various professionals and technical experts who convened to discuss the tasks of setting order to urban America challenged the architectural program of the White City Movement. Roundly criticized was Daniel Burnham's Chicago Plan which speakers opposed for its wasteful expenditures on the construction of static ceremonial set-pieces and its seeming inattention to the dilemmas of industrial inefficiency caused by inadequate or poorly located transportation and housing.

While the erosion of support for the White City Movement in 1909 had surprisingly little immediate impact on the solidity of the professional canons defining urban architecture, it did set

---

[1] Frederick Ackerman, "The Modern Movement," AIAJ 16 (December 1928): p. 465.

[2] See, for example, Royal Cortissoz, Art and Common Sense (New York, 1913); or Richard Guy Wilson, The American Renaissance - 1876-1917 (New York, 1979).

the stage for a broad reappraisal of architectural work which manifested itself after 1919. Unnerved both by war-induced work stoppages and by failing support for the neo-classical monumentalism that had characterized the White City, architects began to test more openly the authority of their design canons. By 1924 at a symposium sponsored by the American Institute of Architects (AIA), even prominent professionals were willing to label the use of historical styles as "plagiarism." In place of stylistic 'languages' borrowed from the past, speakers called for the formulation of a single 'style of the age' expressive of the unique state of American culture.

Diverse ideological sources also fed this discontent. Following World War I, the re-emergence of Louis Sullivan, whose Autobiography of an Idea appeared as installments in the Journal of the American Institute of Architects throughout 1922 and 1923, indicated the revival of the intellectual traditions of romanticism that insisted on the primacy of individual vision and which abhorred the discipline of academicism. Lewis Mumford's Sticks and Stones (New York 1924), which irreverently parodied the architecture of the White City as a sham facade of "imperialism," brought forward an emerging intellectual revolt against the materialism of modern American society grounded on the idea that American cultural production had to reform itself to match the capacity of American technological production. Whereas Sullivan's treatise reintroduced the insistent demand for a unique modern style and proclaimed the independence of the architect from the academic conventions of taste forged through institutions such as the Ecole des Beaux-Arts and its American counterparts, Mumford's text challenged the moral character of American artists themselves: by their association with powerful economic and political institutions into whose ideological services they had placed themselves, Mumford felt that American artists and architects had degraded their work. At the same time, Mumford criticized what he regarded as a "pioneer" mentality rampant among Americans for its constraining pragmatism. He sought a new consciousness -- a modern "American" consciousness -- which would emerge from a revolt against both cultural authoritarianism and pragmatic materialism.

But as Frederick Ackerman would later recognize, the aspirations of modernists seeking a "new consciousness" converged with those of the professional seeking a new and more relevant role

within modern industrial culture. Absorbed in the managerial reforms of American industry which brought about a new level of corporate efficiency both within and outside of the factory, American architects expressed a desire to ally their services with those of the manager in the task of improving the capacity of industry to produce and expand capital. Abandoning their professional roles as artists, architects sought a new affiliation with business by offering architecture as a vehicle for increasing industrial productivity, facilitating the expansion of the city and conveying the logic of consumerism to Americans.

"The Promise of American Architecture": Architecture in the Progressive Era

At the outset of the twentieth century, American architects expressed confidence in the patronage of political and industrial leaders to provide their profession with its authority in matters of its art. In 1905, in conjunction with its annual convention in Washington D.C., the AIA convened a dinner meeting of its prominent members and luminaries in the fields of art, politics, industry, and finance in celebration of two noteworthy examples of the profession's growing influence in American cultural affairs.[3] Speakers including Theodore Roosevelt paid tribute to the work of the Senate Parks Commission, known popularly as the McMillan Commission after its political sponsor. Headed by AIA members Charles McKim and Daniel Burnham, the Commission was charged with the task of re-formulating the original 1791 plan for Washington D.C. by Pierre l'Enfant.[4] Architects and their guests -- among whom were Secretary of War Elihu Root and the financier J.P. Morgan -- also praised the imminent acceptance by the federal government of the American Academy in Rome as an official diplomatic outpost of the U.S. Department of State. In both cases, success reflected well on architects and their professional organization: whereas the proposals made by the McMillan Commission had been supported by the AIA's lobbying efforts and demonstrated the Institute's capacity for effective political organization, the legislative judgments in favor of the American Academy, an organization founded

---

[3] Charles Moore, The Promise of American Architecture (Washington DC, 1909).

[4] For a recent account of the McMillan Commission see Lois Craig et al., The Federal Presence: Architecture, Politics and Symbols in United States Government Building (Cambridge, MA, 1978), p. 252.

in 1898 by McKim as a European center for American students of art and architecture refreshing themselves at the "fountainhead of the classic tradition," gave credibility to the profession's role in formulating a national cultural agenda.[5]

Having synthesized the urban design methods advocated by the McMillan Commission with the neo-classicism whose study the American Academy facilitated, American architects set out on a successful course to forge a national style (figs. 1.1, 2a, b). Roosevelt himself addressed the audience that night and praised the urban and architectural design characterized by axiality and monumental neo-classicism that the McMillan Commission proposed for Washington D.C.[6] The perception of an emerging national style was further reinforced by the fact that many of those present in the audience were patrons of the same architects whose work they now celebrated. Among the most telling examples of this patronage and its support of a quasi-official style was given by the burgeoning reputation and practice of the firm of Charles McKim. Not only Nicholas Butler, President of Columbia University and a speaker that evening, but Roosevelt and Morgan had commissioned the firm of McKim, Mead and White to design projects varying in program from university buildings to a Presidential residence to Morgan's monumental personal library in New York City (figs. 1.3, 4, 5a, b, 6). Even across this range of program types an aesthetic consistency was evident, constituted by what a later U.S. President, William Taft, would call, the "dignity and simplicity of the art of Mr. McKim."[7]

The consensus which gathered behind this model of architecture and urban design also depicted a union of sentiment cutting across the boundaries of special interests. Architects garnered public support for their work through the endorsements of, for example, Roosevelt, whose popularity and reputation sustained his efforts to forge a national political ideology. In his address at the AIA gathering he vowed to include architects among his closest advisers and committed his government to the task of encouraging and carrying out their visions. "The best

---

[5] Henry van Brunt writing on the importance of the French Academy in Rome at the Villa Medici in 1892. See "The Historic Styles and Modern Architecture," Architectural Review I (August 1, 1892): pp. 59-61; II (January 2, 1893): pp. 1-4; in William Coles, ed., Architecture and Society: Selected Essays of Henry van Brunt (Cambridge, MA, 1969), p. 206.

[6] Moore, Promise, p. 17.

[7] Craig, p. 247.

thing that any administration, that any department of government can do," he stated, "is to surrender itself...to the guidance of those who really do know what they are talking about."[8] At the same time, the unique patronage inspired by the American Academy revealed the support given to architects by business and industrial leaders. As a stipulation of its acceptance by Congress, the Academy had to guarantee its financial solvency which McKim had insured by soliciting the support of a group of prominent business leaders including Morgan.[9] Thus, in achieving its status as a governmental institution, the Academy not only transcended the narrowness of its professional origins but catalyzed the cooperative efforts of government and the private sector.

As is noted frequently in histories of late 19th century American architecture, one finds a precursor to both the work of the McMillan Commission and the stylistic conventions supported by the Academy in the celebrated international exposition that opened in Chicago in 1893. For this world's fair, officially called the "World's Columbian Exposition" in celebration of Columbus' discovery of the New World, a commission of American architects and artists including both McKim and Burnham produced a brilliant white, neo-classical setting on the Chicago waterfront. To procure the architectural effect of visual unity, the designers agreed to abide by a strict formal discipline that fixed the height, style, and coloration of the buildings (fig. 1.7).

The drama of the Exposition's architectural imagery was enhanced by its proximity to the real industrial and commercial center beyond: in contrast to the Chicago downtown in which structures of dissimilar height and material were dispersed along a street grid with no discernible rhythm or hierarchy, in the fairgrounds a conventionalized interpretation of classical architecture organized hierarchically around processional axes reinforced the spatial planning. Cultivated and disseminated through the teachings of the Ecole des Beaux-Arts, the Parisian academy attended by the leaders of the American architectural profession, the formal language of classicism proved effective in producing an aesthetic discipline as well as a suitable backdrop to the open courts and axial vistas.

---

[8] Moore, Promise, p. 17.

[9] Morgan and Henry Walters each gave $100,000 to endow the Academy. See Henry Saylor, "The AIA's First Hundred Years," AIAJ (May 1957): II:171.

Accustomed to the ad hoc urban development that characterized their provincial capitals and industrial urban centers alike, Americans became engrossed in the visual order and regularity of the White City. "As a scenic display," Henry Adams wrote of the fair in his autobiography years later, "Paris had never approached it, but the inconceivable scenic display consisted in its being there at all - more surprising, as it was, than anything else on the continent."[10] It was not, however, merely the image of a 'White City' but rather its iconography bearing a social message that pressed it into the popular imagination. As Christine Boyer has suggested, it was in contemplating the discontinuity between the edifying principles of social contract on which their political system was based and the slovenliness of the urban crucible in which that system operated that many Americans came to regard the 'White City' as an appropriate model of urban as well as social reform.[11]

The popular success of the Columbian Exposition provided a basis on which American architects could build a professional consensus. Having forged a.design methodology that was broadly appealing and yet was still rooted in an academic standard, architects equipped themselves with a viable professional design canon. In the same year, architects registered another important victory for their professional standing: bearing evidence of their organizational and design capabilities provided them by the example of the fair, architects working through the AIA effectively lobbied for the passage of the Tarsney Act which made commissions for federal work accessible to private practitioners.[12]

---

[10] Henry Adams, The Education of Henry Adams (Boston, 1918), p. 339.

[11] Christine Boyer, Dreaming the Rational City: the Myth of American City Planning (Cambridge, MA, 1983), p. 43.

[12] In 1893, the Tarsney Act was passed. The original legislation had been prepared by Dankmar Adler in 1885. But, through the merger of the WAA and AIA in 1887, this work was assumed by the AIA. The act gave the Office of the Supervising Architect within the Treasury Department permission to hold a competition among private architects for commissions on federal projects. In 1912, the Act was repealed due in part to the failure of private architects to prevent cost overruns and also to the raising of the AIA fee scale from 5% to 6% in 1908. On the repeal of the Tarsney Act see, Charles Moore, Daniel H. Burnham (New York, 1921); Charles Whitaker, "Shadows and Straws," AIAJ 9 (December 1921): pp. 373-74; Andrew Saint, The Image of the Architect. pp. 90-94; Craig, pp. 202-3. Between 1912 and 1926, the AIA lobbied for congressional authorization of architectural design work done by its members through its Committee on Public Works (chaired by Milton Medary until his presidency of the Institute in 1927 and 1928). In 1926, the Public Building Act was passed which permitted the commissioning of private architects by the government. On the committee's lobbying efforts to help pass the Public Building Act, H.R. 11791 see, for example, AIA Executive Committee Minutes (February 1925) AIA RG 510-3, p. 6. Also see Craig, p. 310.

These affirmations of professional conduct and ability provided the backdrop to the AIA's celebration in 1905. In the presence of powerful and supportive patrons, architects expressed both a sense of accomplishment and confidence in the future of their profession that evening. Four years later the architect Charles Moore, a noted contributor to architectural periodicals and secretary to the Fine Arts Commission which assumed the work laid out by the McMillan Commission, published a permanent record of the words offered on the architects' behalf that evening at the AIA celebration entitled appropriately The Promise of American Architecture (Washington DC, 1909).

Several observations can be made about the revelation of aesthetic consensus and the high esteem for professional architects that existed in 1905. First, one may note that at the same moment that this patronage offered the potential to expand the cultural authority of the architectural profession it imposed selective criteria which limited the scope of the architectural discourse. Other approaches to design did not suit Roosevelt's agenda of a 'national' architecture. For example, those present in 1905 failed to mention the efforts of the well-known Chicago School whose adherents developed strategies of design derived from a closer scrutiny of building program and structural methods. By contrast, the symbolic program of architecture that emerged from the AIA meeting in 1905 and which was celebrated by Moore four years later called for a communicative and conventionalized vocabulary based on the known syntax and grammar of neo-classicism which depicted -- as the work of the Chicago school could not -- the order and consensus to which Roosevelt aspired in his political strategies. Second, the association of this architecture with a political ideology suggests that it was expected to perform a rhetorical function. The unity of form and color as well as the celebration of national government implicit within the monumentalizing strategies of the McMillan Plan offered a corollary to the Republican platforms under Roosevelt which prioritized a nationalized political economy.

American neo-classicism and the related scenographic monumentality demonstrated its rhetorical function by depicting a consensus -- even among diverse interests -- behind the agenda of centralizing political authority. As with Theodore Roosevelt's support of the profession,

Morgan's financial aid not only delivered the American Academy into the service of the government but indirectly sustained the efforts to nationalize American architecture by institutionalizing the political correctness of classical architecture and European urban models. Unlike Roosevelt, however, Morgan's actions seem at first glance to be at odds with his private ambitions. Whereas Roosevelt's support for the aesthetic unification of urban environments across the country might be seen as a corollary to his own efforts to unify the regulatory mechanisms of national government against the disruptive presence of monopolies, Morgan, who pioneered and championed industrial consolidation and endured federal challenges to his massive trusts, had less apparent reason to contribute to the efforts to forge an architectural rhetoric expressing national solidarity in either politics or architectural aesthetics.

Some historians have portrayed this condition as evidence to support the thesis that in the late 19th and early 20th centuries, Americans aspired to a cultural consensus predicated on the aesthetic conventions of neo-classicism even in the face of antagonism between their political philosophies and economic interests.[13] But other historical interpretations have attempted to show that the architectural representation of consensus was not inconsistent with the condition of the political discourse: groups with various interests expressed their support for the agenda of national solidarity gathered behind the political authority that would be monumentalized in the urban settings of Washington D.C. Their mutual embrace of monumental neo-classicism and the messages of national solidarity are attributable to their joint interest in establishing architecture as a mechanism of social control.[14]

In the late 19th and early 20th centuries, the aspiration for social order achieved through the medium of political authority permeated American society. At its base lay an alloying fear of volatility expressed by middle class Americans confronting depression in the industrial economy and labor unrest. As Alan Trachtenberg and others have shown, both patrician New Englanders and mid-western white-collar workers perceived themselves to be trapped between the "ruthless,

---

[13] See for example, Wilson, American Renaissance.

[14] Alan Trachtenberg, The Incorporation of America: Culture and Society in the Gilded Age (New York, 1982), p. 147.

dangerous working classes" and the "vulgar wealth" of industrialists, common victims of the social

discord, political upheaval and imminent malfunction of the capitalist order brought on by class

antagonism.[15] A feeling of lost control over social behavior and a disruption of moral and ethical

conventions amplified their anxiety of entrapment. The prevalent sense of danger in the social

order was exacerbated by the ethnic diversity of American cities, a condition which overlaid

differences of culture and language on the fractious web of social relations. This political and

social disarray seemed to manifest itself in the fabric of cities themselves which were discontinuous

conglomeration of urban activities arranged with no apparent order.

Proponents of a 'national' and unifying culture among the middle classes were joined by

social workers and labor advocates who held up the protestant virtues of moral and physical

discipline and self-help as means by which laborers could extract themselves from the conditions of

their class. Reformers spun a welfare mythology which depicted social entrapment by

pauperization among the lower classes as a condition to be combatted through the civilizing force

of education and the cultivation of moral strength and character.[16] Synthesizing themes of

democracy and individualism with those of discipline and obedience to the moral order of

Protestantism, social reformers produced a rhetoric with wide currency among the middle class.

Further evidence of the widespread support of the White City is given by a similar

aspiration to restore discipline and social order that was apparent among industrial managers. On

the one hand, the management discourse idealized an obedient work force and held only contempt

for organized labor. On the other, managers participated in the agitation for social discipline by

their advocacy of order and reason, central themes in the emerging science of business

administration. Like the proponents of 'national' culture, business administrators perceived

themselves as arbiters of social conduct guided in their judgment by the 'scientific' principles of

management and legitimized by the social utopianism with which they defended industrial

planning. Viewing depression cycles as unproductive and damaging to profits, administrators

counselled self-restraint among capitalists as well as workers and cautioned against excessive

[15] Ibid., pp. 153-54.
[16] Boyer, Rational City, p. 20.

39

profit-taking on the basis that it undermined the ability of management to respond to changing circumstances of supply and demand.[17]

Making claims of disinterested service to the 'public good,' the emerging managerial profession claimed an alliance with the political leadership that accompanied Roosevelt and his successor Taft. Commenting on this pretense to converging agenda, Gabriel Kolko has recently suggested that instead of enmity between business leaders and governmental regulators, a 'new solidarity' emerged in which industrial managers accepted the authority of the state to impose control on the occasional "anti-social businessman."[18] As Henry Adams observed, this alliance was firmly established in 1893 when Congress adopted the : d Standard fixing the value of American currency and creating greater incentives for competition .eading to industrial efficiency.[19] When appeals to the reason of industrialists failed to prevent drastic downturns in the 1870's and mid-1890's, administrators themselves endorsed governmental control and joined supporters of Roosevelt in the advocacy of federal industrial regulation.[20] Even individuals outside of the ranks of administrators acknowledged the synergy between business and government to be desirable: by the end of the 19th century, many Americans regarded business administration as a logical and disciplined field of knowledge into which the affairs of state could be safely transferred. Inspired by the emerging critique of 'boss' rule, advocates of civil service reform recommended that politics be removed from the control of 'uncultured' career politicians and placed instead in the hands of disciplined managers.[21]

The popular support for a synthesis of business administration and politics also gave direction to American international diplomacy. Although the financial rewards of American forays

[17] On business administration see Alfred Chandler, Strategy and Structure: Chapters in the History of Industrial Enterprise (Cambridge, MA, 1962), pp. 23-37 ; David Noble, America by Design: Science, Technology and the Rise of Corporate Capitalism (New York, 1977), pp. 257-320. See also Gabriel Kolko, Main Currents in Modern American History (New York, 1984), pp. 1-34.

[18] Kolko, American History, p. 32.

[19] Thus, for Adams, that year marked an historical apotheosis of the efforts to "incorporate" American life. While the Chicago Fair demonstrated an "expression of unity" aesthetically, the acceptance of the Gold Standard prioritized a national consolidation of business activities in industry and agriculture. Adams, pp.343-5.

[20] The progressive agenda expressed by individuals such as Croly and Richard Ely and personified by Roosevelt expressed a commitment to a "public good" which rose above individual self-interest. Kolko, American History, pp. 30-31.

[21] Trachtenberg, pp. 163-65.

in South America and the Pacific were marginal at the end of the 19th century, industrial leaders

intent on procuring access to sources of raw materials as well as the potential of expanded markets

for American industrial products supported the expansionist policies of the federal government.[22]

Their arguments in support of colonization and political meddling recalled the terminology of

social reform citing discipline and order as the goal of U.S. involvement in foreign countries. This

mode of defending imperialism reached an apex with the Roosevelt Corollary to the Monroe

Doctrine of 1904 which staked out the exclusive rights of the United States to intervene with force

in the affairs of any country within its hemisphere to prevent, "a general loosening of the ties of

civilized society."[23]

The formulations of international diplomacy which took the moral high ground in defense

of foreign intervention shared a common pretense equating military force and economic expansion

with the propagation of culture and civilization. Political reform proffered in the name of stability

and order and legitimized as the basis for economic development leading to higher forms of

civilization accompanied American interventions in the Philippines, Cuba, Columbia, and Panama

in the first decade of the 20th century. The pretense was also expressed in, for example, the 'Great

White Fleet,' an armada of American warships that travelled the globe in 1907 to encourage Japan

and other Pacific nations to maintain the status quo, its white battleships conveying an impression

of purity to the American intentions expressed by the Roosevelt Corollary to police the world and

maintain the peace in the name of civilization.[24]

The themes expressed by American international politics reverberated with the agenda of

19th century domestic reform. The image of the fleet dispatched at the government's behest

circling the globe and extracting concessions to the political order found a supportive audience

among those Americans who desired a similar show of authority as a means of quelling social

unrest at home. The iconography which emerged out of this political milieu recalled similar

themes. Just as Roosevelt's efforts to institute federal regulations controlling the excesses of

---

[22] William Becker, The Dynamics of Business: Government Relations, Industry and Exports, 1893-1921
(Chicago, 1982), pp. 69-90.
[23] Kolko, American History, p. 46.
[24] Arthur Schlesinger, ed., The Almanac of American History (New York, 1983), p. 415.

American corporate leadership bore a relationship to his efforts to 'regulate' international relations through political and military intervention so too did the 'Great White Fleet' bear a relationship to the work of the McMillan Commission in Washington D.C., monumentalizing the political and military authority of the federal government.

The diverse groups expressing a commitment to social discipline found a unifying ideology in Progressivism, a pragmatic doctrine of political reform seeking resolution to the social tensions created by industrial expansion and the excessive concentration of wealth in late 19th century America. Progressivism offered strategies of political and cultural involvement promising relief from the anxiety of social disintegration. Thus, Progressivism appealed to a variety of interests including advocates of labor welfare, supporters of rational business administration, civil service reformers, and others who shared both the sense of danger in the existing social condition and a commitment to reconstruct as necessary the institutions of government, industry, and culture in order to defuse social conflict.

However, at the same time that Progressives proposed change in the institutional pattern of American life they expressed a conviction in the ethical correctness of American democracy and the principles of self-improvement and ethical piety. Moreover, Progressivism did not seek to abandon the course of industrialization or the dynamism of the capitalist economy. Adherents of Progressivism rightly insisted on their label as reformers: their goal was to devise strategies of adjusting the mechanisms of government, philanthropy, and cultural patronage as a means of rendering the force of class antagonism benign without, however, fundamentally altering the social consequences of industrial capitalism.[25]

Herbert Croly, an editor of the Architectural Record between 1900 and 1906, provided one of the most coherent examples of the Progressive agenda. In his popular text, The Promise of American Life published in 1911, Croly proposed a metaphor for the American experience that reiterated both the mythology of American material abundance and the predictions of societal

---

[25] On Progressivism see, for example, Richard Hofstadter, The Age of Reform (New York, 1955); Gabriel Kolko discusses the eagerness of American businessmen for governmental regulation as a means of eliminating competition in his The Triumph of Conservatism (Glencoe, IL, 1963); Robert Wiebe, The Search for Order, 1877-1920 (New York, 1967); Richard Pells, Radical Visions and American Dreams (Middletown, CN, 1973).

collapse on which 'reformers' based their advocacy of institutional change. For two generations,

Croly noted, the "New World" had offered a "promise" of economic success so easily achieved that

Americans had come to think of it as the result of an automatic process not unlike "sliding down a

hill." But, while the course down to the "Valley of Fulfillment" had been smooth for the first

European immigrants to the New World, those that followed found their path obstructed by the

successful Americans who staked a claim and defended their material wealth and social position.[26]

Within this scenario of competition Croly observed a "dangerous compromise" of the principles of

democracy and equality whose result was the political volatility observed by reformers. "A

numerous and powerful group of reformers has been collecting," Croly wrote in his introduction,

"whose whole political policy and action is based on the conviction that the "Common People" have

not been getting the Square Deal to which they are entitled under the American system; and these

reformers are carrying with them a constantly increasing body of public opinion." This perception,

he continued, resulted in both the demise of the long held popular belief in American abundance

and, more ominously, social unrest.

> A considerable proportion of the American people is beginning to exhibit
> economic and political as well as personal discontent. A generation ago the
> implication was that if a man remained poor and needy, his poverty was his own
> fault....Now, however the discontented poor are beginning to charge their poverty
> to an unjust political and economic organization.[27]

Croly attributed the rising presence of impediments to the 'Promise of American Life' to

several factors. Echoing the arguments of Frederick Jackson Turner who had predicted

fundamental changes to the national character as a consequence of the closing of the American

frontier in the 1890's, Croly reasoned that as virgin resources diminished so too did the

opportunities to exploit them. He further noted that the expansion of technology and industry, a

phenomenon driven by the motives of profit with the ineffability of a force of nature, not only

created an unparalleled medium of production but also facilitated a massive concentration of

wealth and power. This condition raised both the incentives and the ability for the few who

controlled industrial capital to erect barriers against the competition of newcomers. In the absence

---

[26] Herbert Croly, The Promise of American Life (New York, 1911), p. 18.
[27] Ibid., p. 20.

of models of 'ethical behavior' or compelling political ideals, the wealthy and empowered merely

acted in their self-interest. In Croly's mind, their actions produced the political and economic

injustices apparent in the contemporary setting. "It is...true," he wrote in The Promise,

> ...that the political corruption, the unwise economic organization and the legal
> support afforded to certain economic privileges are all under existing condition
> due to the malevolent social influence of individual and incorporated American
> wealth.[28]

Yet, despite his misgivings about the potentially corrosive action of concentrated wealth

on the promise of equal opportunity, Croly did not discount the dynamism of the profit motive or

its capacity to inspire private initiative and fuel the expansion of productive enterprise. He

accepted the consequences of social stratification, arguing that insofar as class structure coincided

with hierarchies of political authority it contributed to the efficiency of the national industrial

economy. Indeed, Croly -- like Roosevelt before him -- praised corporate consolidation for its

efficiency and suggested that while the corporation represented an unwieldy social force it had

produced, "an economic mechanism which is capable of being wonderfully and indefinitely

serviceable to the American people," leading to their social and intellectual emancipation. Thus,

despite his expression of concern for the failure of individual opportunity in contemporary

American life, Croly accepted as necessary the tendency toward large scale social and economic

consolidation already underway.[29]

As a consequence, Croly's strategies for reform balanced his contempt for 'social injustice'

wrought by the economically and politically empowered with his willingness to accept the

expansion of capitalist power as a means to greater social and intellectual freedom. Rather than a

fundamental change in the political structure, Croly aspired to a change of social consciousness

which would affix the attention of the wealthy on their responsibilities to preserve equality of

opportunity for other, less fortunate Americans. In the reform proposals he sketched out in The

Promise of American Life, Croly put forward a model of appropriate behavior for the privileged

---

[28] Ibid., p. 23.

[29] Croly, American Life, p. 115; David Levy, Herbert Croly and the "New Republic" (Princeton, NJ, 1989), pp. 98-100, 107, 108.

classes emphasizing the ethics of self-denial without, however, challenging their right to seek out and procure money and power.

It was within the context of this strategy of reform that Croly invented a role for government, stressing its function as a medium with which to alter social conscience: Croly charged the 'American state' with the task of subordinating the 'individual' to a "dominant and constructive national purpose." Croly wrote, "In becoming responsible for the subordination of the individual to the demand of a dominant and constructive national purpose the American state will in effect be making itself responsible for a morally and socially desirable distribution of wealth."[30] To this end, Croly cited the regulatory powers of government as the means by which it could effectively curb the "irresponsible" manipulation of wealth and power and cause a "desirable distribution of wealth." The Promise of American Life includes numerous descriptions of legal devices such as, for example, an inheritance tax and tax on excessive corporate profits, with which to achieve this end.[31] But the mechanical regulation of wealth described only a small part of the instrumentality of government as envisioned by Croly. For him, the primary role of government was to edify its constituencies by returning their attention to their social responsibilities in defense of democracy.[32] Of greater importance than regulation was the symbolic function of government whose presence demonstrated the public will to "official collective action."

Similar examples of social idealism coinciding with political pragmatism pervade Croly's writings and characterize the mindset of Progressives. So, for example, Croly postulated that the European settlers who first came to the New World drawn by the 'Promise of American Life' interpreted it in strictly economic and political terms: the 'promise' consisted of both the opportunity to accumulate personal wealth and the political guarantee of personal freedom. But Croly insisted that American abundance and the institutions of law and government that guaranteed the rights of the individual were merely the means to a "higher level of individual and

---

[30] Croly, American Life, p. 23.

[31] Ibid., pp. 370-85.

[32] Levy locates the origins of Croly's notion of the "destiny of government" in the work of Auguste Comte whom Croly's father greatly admired. Levy, pp. 32-35.

45

social excellence."[33] The implication that America represented a Promised Land, Croly maintained, "is that by virtue of the more comfortable and less trameled lives which Americans were enabled to lead, they would constitute a better society and would become in general a worthier set of men."[34] If the free political institutions erected in the name of 'democracy' remained vehicles merely for legitimizing individualism and hoarding assets, the true 'Promise of American Life' would never be realized. It was only if Americans were inspired by their political union to overcome the base instincts of self-interest that democracy would become a "constructive social ideal."

The notion of national purpose culminating in a higher social form encouraged Croly to postulate that the 'Promise of American Life' would also manifest itself in the emergence of a high American culture grounded in national consensus and social idealism. Thus, in his writing for the Architectural Record he developed a critical position advocating the "nationalization" of literature, art, and architecture as well as law and politics, a condition to emerge, he suggested, from the collective efforts of artists, professionals, and experts disinterestedly pursuing idealized solutions to the problems of a technical, programmatic, or aesthetic nature.[35] Moreover, Croly's endorsement of a national culture supported by popular consensus prioritized an iconographic program for architecture and the arts generally in which, like the social philosophies he advanced, individual expression was subordinated to an idealized national voice.[36] In the case of federal architecture, Croly's depiction of the function of government -- that of returning the individual's attention back to his or her responsibility to the body politic -- defined a special iconography to which the centralized monumentality and aesthetic idealism of the White City was particularly well suited.[37]

---

[33] Levy, pp. 98-100.

[34] Croly, American Life, p. 12.

[35] See, for example, Croly's articles: "The Architecture of Ideas," AR 15 (April 1904): pp. 361-84; "The New use of Old Forms," AR 17 (April 1905): pp. 271-93; "What is Indigenous Architecture," AR 21 (June 1907): pp. 434-42. On Croly's advocacy of a "nationalization" architecture see Levy, p. 90.

[36] Croly was not wholly satisfied with this implication in his work. Elsewhere he endorsed the Chicago School and the work of architects such as Louis Sullivan who advocated both a rationalized interpretation of structure and a highly individualistic approach to aesthetics. See by Croly under his pseudonym, Arthur David, "The Architecture of Ideas," AR 15 (April 1904): pp. 361-84.

[37] On this point Croly was somewhat ambivalent. He supported the "beautiful" neo-classicism of the White City as appropriate to a national style but he also expressed hope that a native and non-derivative "style" based on indigenous building types would emerge as the basis of a national architecture. Levy, p. 86.

Croly's thesis of national culture also produced a model of appropriate action for purveyors of culture whose task it was both to edify their audience and inspire the formulation of collective aesthetic values. Croly mapped out a treacherous course pursued by the artist, architect, professional, and expert which ran between their achievement individually within their fields and the capacities of their audience to understand and support their work. Within the context of American democracy as envisioned by Croly, it was the duty of artists and experts to balance their sensitivity to the capacities of their audience with their own 'emancipated' vision. "While not only admitting but proclaiming that the processes of individual and social improvement are mutually dependent," Croly wrote in The Promise, "it is equally true that the initiative cannot be left to collective action. The individual must begin and carry as far as he can the work of his own emancipation."[38]

In attempting to model this process, Croly called upon the specific example of the architect whose artistic and professional success hinged, Croly insisted, on maintaining professional integrity and at the same time attracting a popular following.[39] "The manner in which the result (of acquiring a popular following) is to be brought about may be traced by considering the case of the American Architect -- a case which is typical because while popular architectural preferences are inferior, the very existence of the architect depends upon his ability to please a considerable number of clients." After discussing the professional failure registered in the careers of architects who merely pandered to popular taste and did nothing exceptional in their work, Croly described the ideal scenario of professional accomplishment.

> If he be an intelligent as well as a sincere and gifted designer, his work will up to a certain point grow in distinction and individuality and as good and better examples become more numerous it will attract and hold an increasing body of approving opinion. The designer will in this way have gradually created his own special public. He will be molding and informing the architectural taste and preference of his admirers.[40]

---

[38] Croly, American Life, p. 439.

[39] Croly wrote, "If he be an intelligent as well as a sincere and gifted designer his work will up to a certain point, grow in distinction and individuality and as good or better examples of it become more numerous it will attract and hold an increasing body of approving opinion. The designer will in this way have gradually created his own special public." Ibid., pp. 444-45.

[40] Ibid., p. 445.

Croly expressed great confidence in the capacity of the American situation to foster citizens with the strength of character to achieve 'individual emancipation,' liberating themselves intellectually and emotionally from the crowd. But in advancing this idea, as David Levy has suggested, Croly struggled to rationalize an imbalance he perceived between the "demands of intellectual and artistic integrity and the prevailing shoddiness of popular taste."[41] With a pragmatism characteristic of Progressives generally and troubled by the predicament exemplified by the architect whose opportunities for work seemed to be inversely related to the exalted qualities of his vision specifically, Croly fixated on the notion that the patronage by the wealthy offered a viable means of sustaining and disseminating the work of talented professionals who did not pander to popular taste. Thus Croly identified yet another category of tasks constituting the social obligations of the American "millionaire."[42] Millionaires, he surmised, represented a different type of elite class from that of European aristocracy especially in the fact that they had at their disposal 'new' money. With no traditional outlet for the power they had amassed through their control of business and industry, it was Croly's hope that they could be persuaded to invest their wealth and demonstrate their power through great civic works.

Croly's strategies reverberated with the dominant trends in architectural design celebrated by the AIA in 1905. Returning to the example of the World's Columbian Exposition, one recognizes an artistic discipline and aesthetic idealism reinforced by the buildings' whiteness and the use of classical motifs and rendered legible by their dramatic juxtaposition with the unruly urban context of the commercial city beyond. The Exposition also depicted the theme of political unity and the hierarchization of public and private interests. In the fairgrounds, the main axes running across an open body of water offering long views of the stately buildings, culminated in pavilions housing either administrative functions or serving ceremonial purpose (figs. 1.8, 9). Thus the spatial enclosure for the exhibitions of industry, agriculture and craft productions were subordinated to the primary and controlling presence of the administrators symbolically housed in a building that dominated the ensemble. The pyramidal massing of the central administration

[41] Levy, p. 91.
[42] Ibid., p. 88.

48

building by Richard Morris Hunt reinforced the image of its dominance over the larger but less prominent volumes of the exhibition pavilions.

Physically present and hierarchically pre-eminent, the Administration Building and the ceremonial pieces with which it held a formal dialogue presaged the Crolyan image of government as an emphatic center of the social experience. Stylistically, the architecture of the Exposition suggested that individual expression had been suppressed and was contained within the controlling vocabulary of classicism. Perfected and codified in the aesthetic canons governing the proportions and motifs suitable to columnar orders, the grammar and syntax of this architectural style offered a visual parallel to the models devised by Croly that defined ethical behavior as the effort to achieve a common and collective -- rather than individual -- fulfillment.

That this iconography was intended by the architects of the Columbian Exposition is demonstrated by the comments of Henry Van Brunt, a student of Hunt's and one of the coterie of designers invited to collaborate in Chicago on the designs for the pavilions. Even before the fair had been planned, Van Brunt had outlined what he believed was an appropriate aesthetic program for its architecture. Describing an association between architectural form and social behavior, Van Brunt wrote in 1892 that, "Symmetry is the visible expression of unity." Expanding on this notion, he went on to describe the political message conveyed by a less rigorous visual ordering and its impropriety as a platform for the expression of national consensus.

> The moment the correspondence of balanced parts on each side of a center line is disturbed by the introduction on one side of a mass or detail which does not appear on the other, at that moment the design begins to lose somewhat of its unity and to enter the domain of the picturesque, in which ceremony and state become secondary to considerations of comfort and convenience.[43]

The Exposition carried other themes of Progressivism forward. For example, the organizers made much of the fact that sponsorship for the buildings was largely private, a fact which seemed to support the idea -- following Croly -- that the economically empowered were facilitators of culture. The coincidence of industry -- housed symbolically in large exhibition buildings situated off of the primary axes of the lagoons -- and images of authority conveyed by

---

[43] Henry Van Brunt, "Architecture at the World's Columbian Exposition," Century Magazine 66 (July 1892): pp. 385-99, in Coles, Essays of van Brunt, p.245. In same anthology see also Coles, "Introduction: the Writings," p. 72.

Hunt's Administration Building and the statuary celebrating nationhood reiterated the synergy of government and business that fueled Progressivism. The Exposition also offered the opportunity for Americans to depict their international presence and intentions. The 'Columbian Fountain' situated at the foot of Hunt's Administration building both recalled the discovery of the continent by Columbus and foreshadowed the global trek of Roosevelt's White Fleet. In subsequent expositions in Buffalo, St. Louis, and San Francisco, axial planning, neoclassical pavilions and images depicting the birth of the Republic coincided with celebrations of pan-Americanism.[44] It is not insignificant that Daniel Burnham, head of the art and architectural committee supervising the design and construction of the Chicago Exposition and member of the McMillan Commission, would later prepare a city plan for Manila, capital of the U.S. Protectorate of the Philippines, based on the model of the White City.

The scale and grandeur of buildings for government, cultural institutions, libraries, theaters, museums, and other public institutions designed according to the model of the Columbian Exposition were manifestations of the unique American social climate which Croly described.[45] As much as these images may have demonstrated a cultural evolution and the emergence of an aesthetic consensus operating nationally, they also revealed the capacity of architecture to serve as a modality of power. Both Croly's text and the Progressive Movement it came to symbolize legitimized the monumentalization of national political institutions, the unification of taste behind images of authority and the suppression of multiplicity and dissension in the name of a social and cultural idealism. Thus, Progressivism imbued architecture with a rhetorical function, concealing strategies of social control behind the benign cloak of high culture.[46]

---

[44] The Buffalo Fair in 1901 was called the Pan American Exposition. The Panama-Pacific Exposition in San Francisco in 1915 celebrated the opening of the Panama Canal, a triumph of international diplomacy achieved by Roosevelt with military intervention in Columbia.

[45] Croly failed to appreciate that these monuments symbolized a centralization of power and reinforced the social and political structure from which this class of individuals drew its authority. In Croly's mind the millionaire was a legitimate and somewhat harmless facilitator of the artistic flowering of American culture. Croly, "Rich Men and Their Homes," AR 12 (May 1902): pp. 27-32.

[46] Alan Trachtenberg makes a similar point about numerous cultural pursuits in the late nineteenth and early twentieth century. "The conjunction of culture with wealth and property on one hand with surrender, self-denial and

Idealism and the Historical Legitimacy of Academic Eclecticism before 1910

Encouraged by late nineteenth century Republicanism and the Progressive ideology,

American architects introduced the language of social idealism into their discourse, expressing

support for a 'national' architecture and dedicating themselves to the task of formulating an

American culture at once popular and refined. This emerging trend is evident at the outset of the

1900's in the influential writings of Henry Van Brunt, a prominent member of the AIA and

Institute President in 1898 whose descriptions of the architecture of the Columbian Exposition we

have already briefly considered. Beginning in the mid-19th century, Van Brunt contributed

numerous articles to professional journals such as the Architectural Record in which he outlined a

theoretical strategy for American architectural design. At the core of Van Brunt's writing was his

belief, derived from the intellectual canon of Germanic idealism, that art and architecture gave

historical evidence of a collective, 'national' spirit by which posterity would judge preceding

civilizations.[47] In viewing 'modern architecture' as the historical evidence of the national

personality by which his own generation would be esteemed, Van Brunt recoiled from the

excessive individualism that had produced the visual disorder of post-Civil War eclecticism.[48] As

Croly would later do, Van Brunt despaired over the implication of social disarray given by the

failure of a cultural consensus to emerge and show itself in American architecture before 1890.

Yet even more troubling to Van Brunt was the prospect that in the absence of a shared aesthetic

vision expressed as a cogent architectural 'style,' his generation of Americans would relegate itself

to historical oblivion.[49]

---

subordination to something larger on the other gave it a cardinal place among instruments of social control and reform."
Trachtenberg, p. 147.

[47] On Van Brunt, see Coles, Essays of van Brunt. On Hegelianism and its influence on architectural history
see Ernst Gombrich, "Hegel and Art History." in Dimitri Porphyrios, ed., On the Methodology of Architectural History
(New York, 1981), pp. 3-9.

[48] On Van Brunt's theory of historical evidence see William Coles, "The Writings," in Coles, Essays of van
Brunt, pp. 33-74.

[49] This was a widely held belief based on the historical observations equating cultural development with the
growth and refinement of artistic expression. Writing in the same period, the critic Montgomery Schuyler voiced a similar
belief as in his article, "The Brooklyn Bridge as Monument," Harper's Weekly (May 1883): p. 326; in William Jordy and
Ralph Coe, eds., American Architecture and Other Writings by Montgomery Schuyler (Cambridge, MA, 1961), pp. 331-
44.

In his early criticism, Van Brunt embraced the 'scientific' design methodologies proposed by theorists such as Eugene Emmanuel Viollet-le-Duc (whose Discourses on Architecture he had translated from the original French in 1875) as the means by which American architects could resolve the social and historical dilemmas posed by the lack of a national architecture.[50] Like the noted critic Montgomery Schuyler, his contemporary, Van Brunt agreed with Viollet's postulation that rather than being merely fixed and autonomous languages of form, historical styles bore a relationship to the "spirit or the genius of the people and the time" authentically reproduced in the technologies and materials they exploited to resolve their programmatic and symbolic needs.[51] But while Van Brunt was attracted by Viollet's depiction of styles evolving from the interaction of human need, artistic imagination and its material circumstances, he was troubled by the French critic's predictions of constant change in aesthetic conventions. Moreover, as William Coles has suggested, the relativism of Viollet's writings evident in his focus on the relationship between architectural form and the intellectual resolution of structure and program "blurred the question of (a building's) objective value as a formal composition."[52] Having shifted the emphasis of the design process away from the formal qualities of the artifact, Viollet's theories did not adequately respond to the need Van Brunt sensed for a design methodology that yielded concrete evidence of aesthetic consensus.

Van Brunt proposed a compromise, therefore, between Viollet's dynamic and relativistic model of stylistic change and his own immediate desire for a static and objectified formal presence denoting aesthetic consensus. To this end he postulated the necessity of two modes of architectural design, the one based on 'romantic' styles and emphasizing the action of individual inspiration in the formation of an aesthetic language and the other based on 'classic' styles which returned to the transcendent and universal language of neo-classicism. Tracing the development of the 'romantic' styles in the Gothic revivalism of John Ruskin as well as the writings of Viollet-le-Duc, Van Brunt observed their rootedness in building methods and building program. Those

[50] Eugene-Emmanuel Viollet-le-Duc, Discourses on Architecture, trans. Henry Van Brunt (Boston, 1875-81).
[51] See, for example, Henry van Brunt, "The Historic Styles and Modern Architecture," Architectural Review I (August 1, 1892): pp. 59-61; II (January 2, 1893): pp. 1-4, in Coles, Essays of van Brunt, pp. 289-304.
[52] Coles, "The Writings," p. 41.

'styles' in which material and programmatic conditions were thematically present -- as in the work of the Chicago School -- might, Van Brunt argued, play an important role in the eventual evolution of a 'modern architecture.' But, in their specificity and individuality, the romantic styles could not express the highest thought of the "human race." "Classic art," on the other hand, "presents itself to the modern architect with all the majesty of authority and all the imposing beauty of a perfected language of form."[53] He continued,

> If it is our duty to express with our art the civilization of our time, this function could not be fulfilled if we should neglect the style which calls for the exercise of the finest capacities of our culture. [Classic] architecture, in its innumerable manifestations, has been the chosen language in which the greatest architects and most advanced societies of the human race have expressed themselves for more than four centuries....We have no doubt that the most cultivated, most learned, and most refined ideas of our race will continue to be expressed in this eloquent language.[54]

In 1892, while considering the appropriate architectural style for the World's Columbian Exposition, Van Brunt openly endorsed neo-classicism as a style appropriate to a national expression.[55] Emphasizing its European origins, he suggested that 'classic architecture' offered an architectural language familiar to cultured people. "Now this language, the artful product of so many civilizations, has become a court language," Van Brunt wrote, "a language of formal and stately courtesy and often of pedantry - which naturally only people of cultivation can entirely understand and appreciate." By virtue of these characteristics, neo-classicism transcended the specificity of individual artistic expression and made its appeal to higher instincts "led by duty, which is serious, instead of taste, which is trifling and dilettante." Thus, the 'classic' styles resolved both the Progressive aspiration for high artistic culture which demonstrated social improvement and the historical dilemma posed by the absence of evidence of a collective 'spirit' expressed in art and architecture.[56]

---

[53] Van Brunt, "Historic Styles," p. 302.

[54] Ibid., p. 303.

[55] As Coles suggests, "The faculty that would put one in touch with truth was not the uncensored unconscious but the strict, self-regulating conscience. It was this latter agency that was enlisted to promote the true historic expression of the age." Coles, "The Writings," p. 43.

[56] Van Brunt, "Historic Styles," p. 299, 300.

As with most of his peers among the leadership of the AIA, Van Brunt believed that the discipline and universality that he sought would be reinforced by the academic traditions of the Ecole des Beaux-Arts (whose pedagogy he had absorbed as a student in the New York 'atelier' of Ecole-graduate, Richard Morris Hunt). As we have already seen in the examples of the 'White City,' the Ecole strategized planning methods, beginning always with a symmetrical distribution of the elements of the program grouped for symbolic effect around a processional movement sequence. But the Ecole, as D.D. Egbert has pointed out, drew its pedagogical direction from a central conviction in the legitimacy of absolute standards of taste formulated by an artistic elite.[57] Thus, the Ecole education prioritized stylistic and proportional conventions recorded in texts compiled by its faculty and disseminated by its coterie of graduates.[58] Moreover, the Ecole teaching emphasized the artistic nature of architecture, a pretense which supported the claim for artistic status made by architects throughout the 19th century. Like Van Brunt, whose exhortations in support of neo-classicism proclaimed that architecture should express noble thoughts, the design methodology of the Beaux-Arts stressed that architectural form-making began with an artistic idea fixed at the moment of conception in the 'parti' diagram, which the architect prepared in advance of the design of the actual building, and related only secondarily to building techniques or structural design.[59] The Beaux-Arts represented, therefore, architecture practiced as a conventionalized mode of artistic expression, abstract and formulated out of the thoughts of the artist/architect but ultimately expressed in the systematized languages of the historical styles.

Although in the main the Ecole inculcated its graduates with a respect for the aesthetic authority of stylistic languages and a distrust for aesthetic relativism, its students did confront an intellectual conflict pitting the absolute standards of 'beauty' recorded in the academic conventions of proportion against the doctrine of appropriate expression that held that the exterior form of a building should convey the 'character' of the activities which took place inside. As Egbert has

[57] Donald Egbert, The Beaux-Arts Tradition in French Architecture (Princeton, NJ, 1980), pp.100-10.

[58] Among the first texts to record the design methods of the Ecole was Francois Blondel, Cours d'architecture enseigne dans l'Academie royale d'Architecture (Paris 1675-1683), which initiated a tradition of text-writing that continued up to Julien Guadet's Elements et theorie de l'architecture (Paris, 1901-1904).

[59] Egbert, p.114.

shown, the expression of 'character' of the building program was central to the analytical method of the Ecole, yielding the primary means of determining the appropriate stylistic language with which to adorn a building type. Though this method stressed the relationship between style and content, the determinations of 'character' depended upon a fixed and hierarchical convention of interpretation whose standards were based not on the contents of buildings per se but rather on the basis of their presumed social value. "The generally dominant and more conservative school of thought (at the Ecole)," Egbert writes, "held that there is a Neo-Platonic hierarchy of architectural programs....Of these the programs at the top are those for monumental buildings possessing the most universality and permanent value because they involve architecture for king, state and church; whereas those at the bottom are the least universal and monumental because they are directly devoted to particular utilitarian and economic needs or because they are works for the lowest social classes."[60]

As Van Brunt's comparison of 'classic' and 'romantic' architecture demonstrates, academicians also interpreted styles on the basis of their principles of composition. Those styles whose basis lay in fixed and 'universal' laws derived from geometrical proportion were deemed appropriate for elevated secular activities by virtue of their humanist rationality. Those styles associated with individual inspiration were appropriate to religious buildings. In general, buildings with a commercial or common utilitarian purpose did not require as thorough a stylistic resolution as those which monumentalized the institutions of social or political authority.

Recorded and conventionalized through the agency of academic institutions such as the Ecole, these interpretive standards formed the basis of a new design methodology. In contrast to the varied and highly individualistic eclecticism which it displaced in the United States, 'academic' eclecticism depended on formalized codes of interpretation applied by the architect to the building's program and structure. And, as opposed to the relativism of 'romantic' architecture which searched for relevant form in the building program or structure, academic eclecticism maintained the fixed conventions of historical styles and used these as the medium through which it

---

[60] Ibid., Chapter on "Character"; p. 100.

communicated the "idea" of the architect. Van Brunt described this methodology in 1893 in an

article entitled "The Growth of Characteristic Architectural Style in the United States." After

describing the "new" conditions of building construction manifested in novel materials such as the

steel frame and new building programs such as the high-rise office building he observed that "iron

and steel must impose upon our art new expressions." But he noted that these expressions would

be made in the vocabularies of the past. "It is the natural impulse of the man of education to

protest against any innovations which cannot be clothed in the accepted forms of beauty and grace

which have become venerable from long usage and from association with the greatest triumphs of

art in history."[61]

By offering a means of organizing and controlling aesthetic production, academic

eclecticism combated both the pluralism of post-Civil War eclecticism and the relativism which

sought immediate and novel relationships between form, structure, and program. American

architects ensconced this view in their professional ideology. Writing in 1913, for example, Royal

Cortissoz described how academic eclecticism brought about a re-emergence of American

architecture in the 1870s and 1880s from the undisciplined eclecticism of post-Civil War America[62]

Crediting H.H. Richardson, Richard Morris Hunt, Charles McKim and Daniel Burnham with

having set American architecture on a "straight and true course," he suggested that it had been

they, graduates of the Ecole des Beaux-Arts with the exception of Burnham, who had first turned

the architecture profession away from individualism to its present conformity to stylistic principles.

The relationship of Cortissoz's historiography to the work of Van Brunt is further shown

in his eventual rejection of the work of Richardson as a suitable model for American architecture:

Cortissoz went on to remark that among these American "masters" Richardson's contribution to

the task of establishing a basis for the emergence of an American architecture was significant but

flawed. Richardson, he argued, had been the first to make "buildings which if not perfect or in

harmony with the true spirit of the age, still called men to a higher plane of aesthetics." He had

---

[61] Henry Van Brunt, "The Growth of Characteristic Architectural Style in the United States," AIAJ 27 (1893): pp. 242-53, in Coles, Essays of van Brunt, p. 324.

[62] As has been recently observed in the ascendancy of the modern movement, the writing of history played a central role in the validation of the design methods and the body of ideas which constituted academic eclecticism.

"cleansed taste." But, Cortissoz continued, Richardson was also guilty of eccentricity, designing

with an "exotic" and "redundant" tendency that encouraged "an inexpressive florid kind of swagger

(among his professional peers and admirers) at a time when the one thing we needed was

discipline."[63] In discussing these two competing qualities in Richardson's work, Cortissoz recalled

the terminology used by Van Brunt ten years earlier by noting that the robust "romanticism" of

Richardson, "heightened our architectural enthusiasm" but fell short as a design approach suitable

for the elevated expressions of a national architecture.[64] Rather than Richardson, who had

instituted the authority of historical styles but who had also transgressed that authority in his

experimental and idiosyncratic divergences from the Romanesque styles he admired, it had been

Richard Morris Hunt, Cortissoz remarked, who carried out the mission "to chasten and organize"

American architecture. Indeed, Cortissoz concluded, Hunt's contribution was the greater of the

two because his work offered an example to other American architects that was consistent with the

goal of formulating a unified, national expression in architecture based on a rigorous interpretation

of historical styles and a noted preference in public buildings for neo-classicism.[65]

The parameters of this design method are demonstrated through the architectural

criticism of the period. Critics assessed buildings by evaluating the designers' interpretation of

program, the diagrammatic clarity of the 'parti' devised in response, its formal execution and the

quality of the ornamental program reinforcing the design concepts. For example, critics praised

Paul Cret's Pan American Union Building, designed in 1907, for its sophisticated resolution of a

complex and irregular program and soon elevated it to become a canonic work of the early 20th

century (figs. 1.10, 11).[66] In his description of the building, Matlock Price identified the historical

---

[63] Cortissoz, Art and Common Sense, p. 389.

[64] Van Brunt himself made similar points about Richardson's work in his criticism. See, for example, Henry Van Brunt, "Characteristic Architectural Style," p.324.

[65] Cortissoz, Art and Common Sense, p. 399.

[66] For an assessment of the criticism of Cret's building, see the recent study of Cret's work by Elizabeth Grossman, "Paul Philippe Cret: Rationalism and Imagery in American Architecture" (Ph.D. diss., Brown University, 1980), Chapter 2. Grossman points out that the competition brief issued for the project emphasized the appropriateness of a "domestic" iconography for the building in order to express its function as a "house" for American states. As a consequence, the dilemma posed by the program resided in the conflict between the expression of a "domestic" character and the necessity of a monumental resolution appropriate to a building of state. Cret resolved this by incorporating typological elements that recalled house functions. Other program elements such as the patio were emphasized in order to recall associations with architectural motifs characteristic to the climates of the equatorial Americas. As the judges

57

sources of Cret's work which infused the neo-classical idiom with an iconography that he deemed appropriate to the message of pan-Americanism.[67]

Throughout the first two decades of the 20th century, numerous American texts on architectural design outlined and endorsed the principles of the Ecole. T.F. Hamlin's book, The Enjoyment of Architecture, (NY, 1916) stressed the primary aspects of the Beaux-Arts design program as being the use of axes connecting primary spaces whose size and location architects determined on the basis of their programmatic importance and functional requirements. As with both Van Brunt and Cortissoz, Hamlin reiterated the importance of a transcendent standard of taste which surpassed the whims of popular fashion and noted that these derived from the academic standards disseminated through education.

> Architecture, as an art of form and color, can as surely be criticized according to the approved laws of form and color as any of its sister arts and it is on these laws that all criticism of architecture must be based.[68] [my emphasis]

Seven years later in his book entitled Architectural Composition (Cleveland, OH, 1923), N.C. Curtis also described the importance of axial circulation to Ecole planning. Curtis, whose text featured the plans by Cret and his fellow competitors for the Pan American Union Building as a paradigmatic model of the design method, also highlighted the importance of the symmetrical disposition of program elements around a processional axis marked by nodal points and cross axes with which the architect depicted the symbolic hierarchies and nuances of programmatic interpretation embedded in the 'parti.' Curtis then stressed the significance of pyramidal massing to reinforce the visual cues of symmetrical hierarchization and frontality.

Curtis also described the analytical methods based on the architect's interpretation of 'character.' It was a primary concern of the architect, he wrote, to "create a building whose character corresponds to its program, whether this building be a box factory, a church, a residence, a tea house, a monument to the heroes of the Marne or any other." The resilience of the Ecole

---

noted, the program for the building was complicated by spatial requirements and juxtapositions of functions which were difficult to resolve in a symmetrical scheme. They measured Cret's success, as Grossman shows, by his ability to balance the symbolic significance of individual room-functions with their size and location within the building fabric.

[67] Ibid., pp.20, 25.

[68] Talbot Faulkner Hamlin, The Enjoyment of Architecture (New York, 1916), p. 30.

methods to fulfill this goal, he claimed, marked their success and identified their suitability even in

a period in which building specialization had produced the necessity for a wide variety of types. "In

a sense this is a modern conception of the ideal of architecture," Curtis wrote,

> for the architecture of antiquity was not strongly characterized. The Propylea and
> the Temple of Athena were not essentially different in character yet one is the
> portal of a fortress while the other is a shrine to the goddess of wisdom. The
> Greeks were not under any necessity for distinguishing between different types of
> buildings by accentuating their character since they had only a very few types and
> those mostly religious.[69]

By contrast, in the "modern" context, Curtis concluded, the distinctions of use and program were of

fundamental importance to architects trying to preserve the artistic content of their professional

work at the same time that they were involved in the execution of projects with an unprecedented

purpose and inspecific social value such as commercial buildings.

The arguments noting the historical necessity of academic eclecticism made by these

writers and critics did not conceal its utility to the professional ideology. Whereas the aesthetic

idealism espoused by Van Brunt found support among Progressives seeking social order, the

interpretive methods that followed existing hierarchies of social value as the means of evaluating

the 'character' of a building program reinforced the political and social authority of dominant

institutions and classes and meshed well with the Republican and Progressive agenda to preserve

the status quo. Moreover, by emphasizing aesthetic standards, architects encouraged the view that

architectural design was a separate discipline from that of, for example, engineering, requiring only

a general familiarity with structural principles but no proficiency in the application of those

principles or the use of technology. Royal Cortissoz alluded to the distinction between the

architect and the engineer in a discussion of the work of McKim, Mead and White, the foremost

American classicists in the early 20th century:

> If they [McKim Mead and White] had dealings with engineers, their associations
> were more intimate with painters and sculptors and the men in the allied
> professions who were part of their circle, men like Lafarge and St. Gaudens. The
> artistic temperament, pure and simple, had everything its own way. The
> important thing was just to make a building beautiful.[70]

---

[69] Nathaniel C. Curtis, Architectural Composition, (Cleveland, 1923), p. 4.

[70] Cortissoz, Art and Common Sense, p. 401.

This claim excluded the engineer from the realm of design which the architect sought to occupy, asserting the primacy of standards of 'beauty' over the pragmatism of the technician.

The programs offered for student competitions between 1904 and 1914 by the Beaux-Arts Institute of Design, an organization founded by American graduates of the Ecole to advance its teaching methods in the United States, further demonstrate the kinds of work for which architects were preparing themselves. Students were subtly instructed that American architecture monumentalized the achievements of American industry and those of the 'captains' directing it. A Yacht Club, a U.S. Embassy in Paris, a City Hall, and urban monuments were featured projects of students competing for the coveted "Paris Prize" which guaranteed them entrance to the Ecole des Beaux-Arts as well as a stipend (figs. 1.12a, b, 13a, b, 14a, b). "It is supposed," the brief for the embassy announced, "that the U.S. Ambassador is to be provided with a palatial residence in Paris." "A monument is to be erected in Manhattan," another brief noted, to celebrate the city's "achievement of international commercial supremacy." Once returned to the United States, these future architects could pick up where their predecessors had left off, servicing the aspirations of the political and economic leadership.

The aesthetic idealism of 'classic architecture' and the academic rigor conveyed to the design process by the pedagogy of the Ecole des Beaux-Arts merged with the prevalent societal ambition to cleanse taste and elevate American culture. Both intellectuals like Croly decrying the deterioration of American culture caused by the presence of undisciplined and multitudinous ethnic groups and industrialists seeking order and submissiveness in the ranks of the American worker joined in a common appreciation of the value of architecture which represented order and unity. By expressing the ideality of art, these architectural 'principles' reinforced distinctions between high and low forms of taste and demonstrated the profession's conviction in the standards and intellectual discipline of academicism. Beaux-Arts Classicism supported the architect within the building process, reinforced the political, social and economic consolidation of early 20th century America and satisfied the aspirations of the dominant class to preserve its hegemony in

---

[71] The Paris Prize Winners between 1904 and 1927 were compiled in Pencil Points Press, _Winning Designs, 1904-1927: the Paris Prize in Architecture_ (New York, 1928).

60

cultural, social, political, and economic affairs.[72] As Lewis Mumford -- who derisively labeled this

the architecture of the "Imperial Facade" -- would shortly remark in his polemical history, Sticks

and Stones (New York, 1924), this "mode of building was almost inescapably determined by the

milieu in which (these architects) worked."[73]

Challenges to Beaux-Arts Classicism, 1910 - 1925

Mumford noted in Sticks and Stones that the vigor of Beaux-Arts Classicism began to

dissipate around 1910 due to the faltering of popular and institutional support for the White City

Movement. "The Imperial regime has been stalled by its own weight," he wrote, observing that

urban reformers who endorsed the monumental building programs and the construction of

dramatic boulevards (generally private groups of citizens working outside of municipal

government) were unable to maintain the public interest over the extended periods which their

proposed work entailed.[74] The economic difficulties thrown in the path of the movement reached

a climax in 1907 with the onset of economic depression.

The depression also stimulated a more pragmatic approach to 'city planning' which

emerged from among the newly formed alliance of engineers, legal experts, sanitation specialists,

and architects who served as facilitators to urban reform: viewing the city primarily as a center of

production and distribution rather than as a locus of civic education, they embraced the notion that

urban planning could resolve the dilemmas of industrial disorder. 'Planners' made headway among

their constituency within the business community by advertising the pragmatism of their discipline,

---

[72] Wilson, American Renaissance, p. 30. On the influence of the professional organization and the
"professional" agenda which dominated during this period, especially the emphasis within the AIA on garnering for the
private architect more commissions from the federal government, see Saint, chapter on the American professional. See
also Wilson, The AIA Gold Medal (New York, 1984), p. 48.

[73] "Can anyone contemplate this scene and still fancy that imperialism was nothing more than a move for
foreign markets and territories of exploration? On the contrary, it was a tendency that expressed itself in every
department of Western Civilization....It seems inevitable that the dominant fact in our civilization should stamp the most
important monuments and buildings with its image. In justice to the great professors of the classic style, Messrs. McKim
and Burnham and Carrere and Hastings one must admit that the age shaped them and chose them for its ends. Their
mode of building was almost inescapably determined by the milieu in which they worked." Lewis Mumford, Sticks and
Stones: A Study of American Architecture and Civilization (New York, 1924), p. 62.

[74] Ibid., p. 71-2.

now to be based on technical rather than artistic methods.[75] Remarking that these conditions

pitted the design professionals who guided the White City Movement against the more technically

oriented discipline of planning, Mumford wrote that, "the cost of cutting through new streets,

widening grand avenues, and in general putting on a monumental front has put the pure architect

at a disadvantage." He continued:

> There is the same disparity between his plans and the actual aims of the
> commercial community as there is, quite often, between the prospectus and the
> actual organization of an industry. Within the precincts of the modern city, the
> engineer, whose utilitarian eye has never blinked at the necessity for profitable
> enterprise, and whose interest in human beings as loads, weights, stresses, or
> units pays no attention to their qualitative demands as human beings - within
> these precincts, I say, the engineer has recovered his supremacy.[76]

In May of 1909 at the First National Conference on City Planning held in Washington

D.C., the scene of the White City Movement's greatest successes, 'planners' stridently announced

the parameters of their discipline and their disagreement with improvement strategies that sought

aesthetic reforms.[77] Speakers made aggressive and pointed attacks on the work of Burnham and

others: criticizing the White City model for its impracticality and inability to respond to the

deficiencies of the city as a multi-functional center facilitating commodity exchange, planners

began to address themselves to the task of identifying political tools and mechanical sciences by

which they could intervene in the name of social progress.[78]

As the White City gradually lost its relevance among urban reformers after 1909, Beaux-

Arts Classicism encountered challenges to its hegemony as the style in which were rendered

buildings housing and symbolizing the activities of political and economic authority. It was not that

stylistic diversity was new: seeking a broad terrain of historical styles within which they could

express the 'character' of their diverse projects, Hunt, McKim, Mead and White and their peers

had long exploited the license of academic eclecticism which permitted them to depart from the

---

[75] For a text arguing this view of planning see Nelson Lewis, The Planning of the City (New York, 1916; reprinted 1923).

[76] Mumford. Sticks and Stones, pp. 71-2.

[77] See Proceedings of the First National Conference on City Planning, Washington D.C. May 21-22, 1909, cited in Mario Maniera-Elia, "Toward an Imperial City," in Giorgio Ciucci et al, The American City from the Civil War to the New Deal, (Cambridge, MA, 1979), pp. 105-112.

[78] Maniera-Elia, "Imperial City," p. 105.

models of 'classic' architecture. But it was the authority of the 'classic' as an appropriate 'national'   .

style that was now challenged.

The importance of a 'national' style was cast into doubt by events such as the coincidental

opening of the two world's fairs held in 1915 to celebrate the completion of the Panama Canal.

Located in a territory that the United States had acquired by political savvy and military threat, few

events could have so accurately conveyed the spirit and level of achievement of Roosevelt's 'New

Nationalism' as the opening of the canal. Now finished, it promised a new connection between the

east and west coasts, facilitating the movement of cargo and navy ships between the Atlantic and

Pacific and marking a new plateau in American commercial and military activities both nationally

and internationally. In San Francisco, an urban center built on trade but devastated by earthquake

and fire in 1906, fair organizers were eager to reaffirm the national status of the city and opted for

a neo-classical ensemble using, as at Chicago, the strategy of an architectural commission charged

with the responsibility of assembling a coherent and unified setting for the international event.

Together with Edward Bennett of the D.H. Burnham Company, the San Francisco architect Willis

Polk laid out the fairgrounds and invited New York architects Henry Bacon, Thomas Hastings, and

the office of McKim, Mead and White to join four California offices to design the pavilions. Polk's

selection of Burnham's office as well as Bacon (whose reputation had been established by his

winning entry to the competition for the Lincoln Memorial in Washington D.C.), Hastings and

McKim, Mead & White as principle architects of the fairgrounds and buildings fit well with the

prevailing taste of the first decade of the 20th century (fig. 1.15a, b).[79]   But in San Diego, a boom

town that had grown with the fortunes of the resort industry of southern California, fair organizers

prided themselves on the uniqueness of the place and expressed no desire to conceal those

---

[79] The design strategy for the fairgrounds conceived by Bennett focused the attention of the participating architects on the designs for courtyards rather than merely isolated buildings. McKim, Mead & White were responsible for the principle Court of Honor. Polk took the responsibility for the largest building, however, which was the Palace of Fine Arts and submitted a design — openly acknowledged to be the work of his team member, Bernard Maybeck — whose basic motif was borrowed from neo-classical traditions but whose formal development and ornamental program was somewhat iconoclastic. The Palace of Fine Arts by Maybeck — perhaps the most popular building at the fair — signified a growing dissatisfaction with the rigorous classicism whose best examples were found in the work of McKim. On Maybeck's and Polk's work see Kenneth Cardwell, Bernard Maybeck (Salt Lake City, 1983); and William Jordy, American Buildings and their Architects: Progressive and Academic Ideals at the Turn of the 20th Century (Garden City, NY, 1972).

distinctions under the guise of an overarching national culture expressed in neo-classicism. Instead of McKim et al, the architectural purveyors of national culture, the organizers engaged Bertram Grosvenor Goodhue who had already demonstrated his ability to convey a sense of place through romantic stylistic imagery and site planning in his work for the U.S. Military Academy at West Point executed between 1903 and 1910 (fig. 1.16). Goodhue's brief work for the newly established Panama Canal Zone had also demonstrated a potential direction for a 'regional' style using simple cubic volumes in concrete and stucco to which he added, for the Panama California Exposition of 1915, a rich ornament "densely massed in counterpoint to broad blank walls forming a backdrop to the green and floral landscape."[80] Situated atop a hill and arrived at by bridge, the fairgrounds resembled a walled city, an image of iconoclasm and cultural distance which suited the temperament of the residents of southern California among whom Goodhue's 'churigueresque' became a fad in the 1920s (fig. 1.17a, b).

The competition between neo-classicism and the romantic imagery of architects such as Goodhue reflected the changing personality of patronage. In 1913, both Roosevelt and his Republican heir, William Taft, lost to the Democrat Woodrow Wilson in the presidential elections. As is frequently noted, neither Wilson's political aspirations nor his demeanor were wholly dissimilar from Roosevelt's. But as a Democrat, Wilson had no vested interest in supporting the grand architectural programs embraced by his predecessor. Nor did he offer the open and publicly stated support for architects which Roosevelt had voiced -- a consequence, as some suggest, of the AIA's inopportune endorsement of Roosevelt's third party bid for the presidency in 1911.[81] Moreover, the AIA was unable to maintain the political support for the Tarsney Act. Having proposed an increase in the fees that it recommended be charged by its members, the Institute refused to endorse fee concessions for government clients. In retaliation, the Treasury Department with whom private practitioners were frequently contracted for federal work, sought the repeal of the Act which Congress granted over the strenuous objections of the AIA in 1912.[82]

---

[80] Adolf Placzek, ed., Macmillan Encyclopedia of Architects (New York, 1982), s.v. "Bertram Grosvenor Goodhue," by Richard Oliver.

[81] This is the conclusion of Tony Wrenn, staff archivist at the AIA.

[82] Saint, p.94.

Changes in popular sentiment may also have contributed to the demise of the White City

Movement and its programmed monumentalization of political and economic authority. Though

the reforms to business proposed by Roosevelt had been underway for a decade, their impact in

rationalizing the industrial economy was just beginning to be realized in the expanded regulatory

powers of government. No longer dependent on the personal involvement of presidents, interstate

and federal trade commissions assumed the power to pursue and dismantle overly-large industrial

trusts and to prevent unfair commercial practices.[83] Between 1904 and 1910, 'Muckrakers' opened

the public view to the activities of industrial and political leaders, raised public consciousness, and

provoked a national cynicism that undermined the rhetorical power of monumental symbols of the

White City.[84] Proposed in 1909 and adopted four years later, the 16th Amendment laid the

groundwork for a graduated income tax and limited the largesse of the 'millionaire' in the following

decade. Similarly, civil service reforms calling for more responsible government and greater

accountability to the public produced legislation that changed political practices. In 1907, the

public outcry against influence-peddling by industrial leaders encouraged Congress to forbid

corporations from making campaign contributions to those seeking national office and testified to

the increasing scrutiny of the business/government alliance that had provided the focus of the AIA

convention in 1905. The 17th Amendment passed in 1907 requiring popular election of U.S.

Senators took control of those political appointments out of the hands of state legislatures. The

decade also saw the emergence of a new kind of political leader -- sensible and pragmatic --

replacing the 19th century image of the great 'statesman' with that of the effective bureaucrat

whose thinking was oriented away from public acknowledgment or the monumentalization of

authority. Thus, the repeal of the Tarsney Act coincided with a larger movement of political and

social reform initiated in the late 19th century that was just acquiring momentum around 1910.

---

[83] The Manns-Elkins Act, for example, passed by Congress in 1910 extended the legal powers of the Interstate Commerce Commission.

[84] Publications such as Ida Tarbell's History of the Standard Oil Company, serialized in McClure's in 1903 and Upton Sinclair's The Jungle of 1906 threatened the Progressive's agenda of inspiring cultural leadership among "millionaires." Arthur Schlesinger, Jr.,ed., The Almanac of American History (New York, 1983), p. 413.

At the same time that the demeanor of political and economic institutions was changing, so too was the personality of their public audience. Americans -- especially of the middle class -- acquired a new sense of self-determination buoyed by the growing attention of industrial producers to their wonts and desires. In 1908, Henry Ford introduced his Model T and by 1913 with the introduction of the assembly line could begin on his crusade to bring the automobile within reach of all Americans. The automobile was only one of many industrially produced products which sought a mass-market raising the necessity for industry to communicate to its audience as consumers and shifting the rhetorical agenda of industry away from monumental images reinforcing political and economic authority to advertising that appealed to its audience and created a desire to consume.[85]

Even in the midst of these social and institutional changes, architectural ideologues (to the amusement of some members of the planning community) still paid homage to the powerful professional ideology rooted in the aesthetic idealism of the White City. T.F. Hamlin recapitulated the ideology of the genteel tradition in 1916 by first endorsing academic eclecticism and then insisting that the real agenda of architectural design was to procure beauty. In a chapter entitled "The Social Value of Architecture," he spoke of the goals of urban design. "City planning" he remarked was an "attempt to solve all the practical structural problems which the modern city offers in the best and most beautiful way." Reiterating the program of social coercion that had been at the root of the White City he concluded with optimism for the future of aesthetic idealism that "the modern movement is one of the finest and most promising results of the socialization of consciousness."

But despite the persistence of this canon, the gradual loosening of the professional patronage of the White City renewed the debate over what constituted an appropriate American architecture. Recalling the arguments advanced by Van Brunt in the 1890's, the critic, Montgomery Schuyler, contested the compromise that had sacrificed the 'romantic' styles -- and their potential contribution to the formation of a 'modern architecture' -- for the sake of an

---

[85] On the rise of advertising at the outset of the 1900s see, for example, Stuart Ewen, Captains of Consciousness: Advertising and the Social Roots of the Consumer Culture (New York, 1976).

immediate 'national' architectural voice expressed in the transcendent form of the 'classic.' In 1911

Schuyler contributed to an issue of Architectural Record dedicated in its entirety to the work of

Ralph Adams Cram and his partner, Bertram Grosvenor Goodhue. The "Gothic principle,"

Schuyler wrote, "is the very principle of progress and faithfully applied to modern conditions would

result in an architecture as unlike in form...as medieval building in which thus far it has found its

most triumphant expression."[86] Seven years later, Irving Pond, a former AIA President, similarly

addressed himself to the agenda of a national architecture. In his book, The Meaning of

Architecture, he advocated a return to the structural rationalism of Viollet-le-Duc. "Architecture,

as a phase of art, is an expression in building of that idealism which is capable of translation into

structural terms; that idealism which may be realized in an interpretation of the laws governing

structure."[87] He also invoked the vocabulary popularized by the Chicago School that portrayed the

independent vision of the architect as a means of creating a new architectural form expressive of

the uniqueness of American culture. "I have attempted...to extend the theory...that every artist

owes it to himself and to his time to develop to the fullest his individual expression of the best of

his time and place; for only so and especially in a democracy, shall the race reach the full aesthetic

expression of its own idealism."[88] Pond was joined in his association of the independent vision of

the artist/architect and 'democracy' by the theosophist Claude Bragdon whose book, Architecture

and Democracy appeared in the same year.

The positions advanced by Pond and Bragdon recalled the work of the Chicago School

whose content had been summarized by, for example, Frank Lloyd Wright's lecture, "The Art and

Craft of the Machine," (1901).[89] Condemning stylistic copying as would both Pond and Bragdon,

Wright admonished the artist to accept the "Machine" (a term denoting in its simplest and least

ambiguous interpretation, industrial production), "master" it and thus transform industrial

[86] Montgomery Schuyler, "The Works of Cram, Goodhue and Ferguson," AR 24 (January 1911): p. 87.

[87] Irving Pond, The Meaning of Architecture (New York, 1918), p. 24.

[88] Ibid.

[89] Frank Lloyd Wright, "The Art and Craft of the Machine," (1901), in Lewis Mumford, ed., The Roots of Contemporary Architecture (New York, 1959), pp. 169-185.

technology and the productive modes it invented into an artistic medium. As a result, the "machine" would become, Wright reasoned, the "modern emancipator of the creative mind."[90]

By 1922, Louis Sullivan himself re-emerged at a national level to argue on behalf of these ideas when his autobiography was published in installments by the AIA Journal over the course of the year. Shortly before his death, Sullivan wrote an appreciation of the Imperial Hotel (Tokyo: 1916-22) by Frank Lloyd Wright describing Wright's achievement in the terms of the 19th century debate that had pitted the 'romantic' against the 'classic.' (figs. 1.18, 19) Wright, Sullivan argued, had shown his ability to perceive a complete and thorough formal solution to problems of structure, materials and program and thus produced a building that was "thought-built" and that emerged out of the mind of the artist set against material conditions. This quality manifested itself in the building form which revealed itself to the viewer as a single idea rather than a synthesis of a priori truths. Of the building, Sullivan wrote,

> Upon further analysis, guided by reference to the floor plans, it is disclosed that the structure is not a group but a single mass; spontaneously subdividing into subsidiary forms in groups or single, as the main function itself flows into varied phases, each seeking expression in appropriate correlated forms, each and all bearing evidence of one controlling mind, of one hand molding materials like a master craftsman.[91]

Sullivan's terminology and imagery were important. The use of the word "molding" implied an active involvement with the material conditions out of which the building was made. The notion of the "master craftsman" reinforced the image of the designer fully immersed in the fabrication of the building. Throughout the article, Sullivan portrayed the creative force of the "Master of Ideas" as dominating over all other conditions, an "exposition of the virile thought of modern man," genuine and not received from history. Moreover, the building was not simply a tribute to one man but a characterization of Japanese culture itself. "In this structure," Sullivan wrote, "is not to be found a single form distinctly Japanese nor that of any country." Yet, the design expressed the aesthetic experience and desires of the culture for which it was intended. "It has expressed in inspiring form addressed to the Japanese people their innermost thought." Thus,

---

[90] Wright, "The Machine," p. 178.

[91] Louis Sullivan, "Concerning the Imperial Hotel, Tokyo, Japan," AR 53 (May 1923): pp. 333-352.

in contrast to the neo-classicist who, according to Van Brunt, formulated ideas in the absolute vocabulary of the 'classic,' Wright tapped a universal chord by delving deep into his own artistic consciousness.

Others contributing to the debate about modern architecture were inclined to regard the impulse to modernism more as the consequence of material and social conditions than as the result of 'artistic' inspiration and thus departed from the model of artistic vision advanced by Sullivan, Pond and Bragdon. In 1918, Fiske Kimball and George Edgell rejected, as had Schuyler, the pretense to aesthetic idealism in their comprehensive history entitled A History of Architecture. Noting a "struggle for mastery" between conservative and radical aesthetic tendencies, the one emphasizing "the elements of continuity with the past the other the elements of novelty in modern civilization," the authors suggested that a rising spirit of internationalism would mean that efforts to differentiate between nations would diminish. Instead, they wrote that, "the underlying elements of internationalism existing in the community of practical problems, materials and structural systems," insured that "change in architectural style is bound to be constant and that architecture will remain a living art, not less expressive of the complicated texture of modern life."[92]

Architecture and the American Intellectual

Kimball and Edgell already saw evidence of this new tendency in the work of European architects especially in the "northern European functionalism," the Art Nouveau, and in the work of the Chicago School (figs. 1.20, 21, 22). But, to those American architects accustomed to the methodologies of academic eclecticism and for whom the professional canon associating architectural service with the agenda of 'nationalizing' public sentiment and inspiring allegiance to institutions of power still seemed viable, these assertions were hollow. Even Ralph Adams Cram whose work had offered a stylistic alternative to Beaux-Arts Classicism found it difficult to repudiate its worth as an absolute and universal language appropriate to noble statements of culture. Unlike many of his professional peers who had pursued their architectural training at the

---

[92] Fiske Kimball and George Edgell, A History of Architecture (New York, 1918), pp. 516-7.

69

Ecole des Beaux-Arts, however, Cram was less sanguine about the future of the professional canon

and the capacity of architects to resist an impending 'modernism' revealed in contemporary

buildings. Cram perceived evidence of an emerging modernism -- which he deplored -- manifested

not in architectural styles but rather in the form of American culture. Arguing as a medievalist, he

contended that American society was so dominated by the new institutions of business and

government, whose sole purpose was the pursuit of profit and power, that it had lost its reference

to human values and exhibited no collective moral or ethical character. It was impossible,

therefore, either to justify the nobility of neo-classicism or to hope to find an emerging national

voice worth cultivating. Thus, Cram's dissent placed him at odds with the optimism of late 19th

century cultural critics who embraced the dynamic of industrial production and the profit motive.

Moreover, he divorced himself from both those architects such as Hamlin who clung to a belief

that their professional mandate resided in the responsibility to render national institutions in the

abstract vocabulary of neo-classicism and those such as Pond, Wright, and Sullivan who foresaw

cultural emancipation achieved through the medium of individual artistic vision.

In 1923, Cram published a criticism of the Lincoln Memorial (Washington: 1912-22) by

Henry Bacon, a preeminent example of Beaux-Arts classicism highly praised by American

professionals.[93] Cram defended the design of the monument, a classically inspired "temple"

honoring a national hero whose beauty, he contended, was unquestionable (fig. 1.23).[94] But he

expressed doubt about the selection of the neo-classical style for this building because he could not

rationalize its characterization of Lincoln.

[93] Ralph Adams Cram. "The Lincoln Memorial, Washington D.C., Henry Bacon, Architect." AR 53 (June 1923): pp. 478-508. The memorial was highly regarded by American professionals and in 1923 the AIA awarded Bacon its Gold Medal at a celebration which rivaled the 1905 gathering in its collection of dignitaries. See Harry Cunningham, "The Convention -- As One Architect Saw It," AIAJ 11 (June 1923): p.239.

[94] Cram's defense of the monument's classicism grew out of the debate before the war between advocates of the robust "French" styles popular at the beginning of the century and advocates of American Classicism pioneered by McKim Mead and White. As Elizabeth Grossman has observed, any critics felt that the simple, austere styles employed and popularized by McKim were more appropriate as an American style, representing simple virtues set against the complex, urbane and strident character of the Continental style. See her dissertation, "Paul Cret," chapter three. But Cram went beyond the intellectual confines of that debate by challenging the classical idiom with comparisons to other historical styles as well as to the unprecedented vocabularies that derived from examples of "utilitarian" buildings in concrete and steel frame such as factories and high-rise office buildings.

If we search for analogies, we may say that Lincoln was of the order of the great
Romans of the Republic rather than of the un-moral, aesthetic, intellectualized
Greeks, but the architecture of Rome as we know it was of the Imperial period
and between that and Lincoln there was less community of spirit than in the case
of Greek architecture....The tenderness and the charity and the poignant
sympathy could have been expressed through some of the later forms of Gothic
and perhaps the other qualities as well...but the Gothic is unthinkable in this
connection, for an hundred reasons, one being that apart from a few forms of
religion it is even less consonant with today than is the architecture of Greece.
The architecture of Roman Imperialism, superb, magnificent, tyrannical and in
essence fictitious, is out of the question, and equally Renaissance of any mode.
What will you have if you reject this? Our own Colonial, perfectly adapted as it is
to envisage Washington and the Fathers of the Republic had long been dead and
in any case with its restraint and delicacy and austerity, had nothing to do with the
time when Lincoln lived, when America was sunk in an artistic barbarism worse
than any recorded of any other people in any time, and if this were possible it has
even less to do with us today.[95]

As an alternative to the monument's classicism, Cram considered whether a contemporary

style existed that might be more appropriate. But, "the nearest we have come to [a new style] is in

the steel frame reinforced concrete exposition of commercialism, [and] certainly this does not

apply in the present instance." Cram continued:

It is certainly a fact that not one really great work of art, in painting, sculpture,
architecture, music or poetry has been created during this period. There is
something in our scheme of life that prevents its answering in aesthetic form even
to the last stimulus of war.[96]

Bacon was therefore justified, Cram wrote, "...to go back to the finest things we can find in some

period of the past when art was an integral part of life." But this act did not repair the damage

wrought on modern civilization by the institutionalization of power. Rather, it merely salvaged the

individual event, Bacon's design for a monument, from the larger deterioration of cultural life

going on around it.

The arguments Cram advanced in that review stemmed from a larger examination of

modern culture which he had begun to express between 1906 and 1922 during which time he

produced 15 books and numerous articles on topics ranging from politics to art and architecture.[97]

[95] Cram, "Lincoln Memorial," p. 490.

[96] Ibid.

[97] Books by Cram in these years included, Church Building (Boston, 1914); The Ruined Abbeys of Great
Britain (New York, 1906); Impressions of Japanese Architecture and the Allied Arts (Boston, 1906); The Gothic Quest
(Boston, 1907); American Country Houses of Today (New York, 1913); Excalibur (Boston, 1909); The Ministry of Art
(Boston, 1914); Heart of Europe (New York, 1915); The Substance of the Gothic (Boston, 1917); The Nemesis of
Mediocrity (Boston, 1917); Six Lectures on Architecture (Chicago, 1917); The Great Thousand Years (Boston, 1918); The

In Walled Towns (1919), for example, he produced an anti-modernist attack on industrial culture and the social patterns it fostered. In their place he proposed a return to lifestyles patterned after his own Anglo-Catholic fantasies about gothic life based on patriarchy, religious piety, and a guild system in which goods were produced for use rather than sale. At the center of this depiction, Cram envisioned a social ethic in which work and social life were "integral" with one another in contrast to the separation of culture and the activities of work imposed by industrial production.[98]

Both the tone and terminology of Cram's writing won him praise from a growing community of artists and intellectuals who similarly perceived cultural deficiencies arising from the artificial divisions of "ideals and reality, piety and opportunism, culture and finance" that characterized modern American life.[99] On the one hand, this cultural intelligentsia drew inspiration from the Crolyan model depicting the possibility of an artistic culture emerging from a moral and ethical consensus. But on the other hand, they expressed concern for the impediments to individual thought and expression manifested in the growing power to form and direct social life held by institutions of government and business.

Starting in around 1910, a solidarity developed among artists and intellectuals centered in New York City who mutually supported the movements for individual emancipation in art and politics. By 1912, this consensus of opinion began to express itself more forcefully in public fora, buoyed both by a sense of optimism in the changing of political leadership represented by the election of Woodrow Wilson and by the growing popular activism for political and social emancipation. As Floyd Dell, a writer and contributor to the New York magazine, The Masses, would later remark, "The year 1912 was really an extraordinary year, in America as well as in Europe. It was the year of the election of Wilson, a symptom of immense political discontent."[100]

Sins of the Fathers (Boston, 1919); Walled Towns (Boston, 1919); Gold, Frankincense and Myrrh (Boston, 1919); Towards the Great Peace (Boston, 1922). On Cram's architectural writings see Douglas Tucci, Ralph Adams Cram, American Medievalist (Boston, 1975).

[98] On Cram's Anglo-Catholicism see Jackson Lears, No Place of Grace: Antimodernism and the Transformation of American Culture (New York, 1981), pp.203-15.

[99] Louis Mumford, for example, frequently described Cram as among the most perceptive writers on architecture in the 1910s and 20s. On the substance of the intellectual critique of American culture in the twenties see Pells, p. 7.

[100] Floyd Dell, Homecoming: An Autobiography (New York, 1933), p. 217. Quoted in Martin Green, New York 1913: the Armory Show and the Paterson Strike Pageant (New York, 1988), p. 285.

Intellectual activists participated in demonstrations on behalf of American workers and not only contributed moral support but, as Martin Green has suggested, also committed their artistic efforts to the manifestation of a new 'consciousness' of individual liberty and self-determination. Thus, they celebrated the Armory Show, an exhibition of European modern art ranging from Cubism to Dada which opened in New York in 1913 for the challenge it offered to public sensibility and to the established canons of "bourgeois taste" gathered behind the aesthetic idealism of the "Renaissance Tradition."[101] The spirit of this sentiment was recorded later by the art critic, Meyer Shapiro, who discussed the value of the artworks exhibited in the Armory Show as residing in the challenges they offered to conventional standards of appreciation and the promise they contained of direct encounters with art by which the individual broke the bondage to official taste.[102]

Within the following decade, intellectuals took part more openly and more explicitly in a movement to encourage a new 'consciousness' among Americans, a sign, as Richard Pells has suggested, of their new willingness to participate in American life rather than merely to critique it from a distance. In a sense, writers, critics, artists, and editors continued the work outlined by Croly, seeking a higher cultural order. But they now based their work on a belief in the artistic independence of the individual rooted in direct and authentic experience.[103] Pells has suggested that Van Wyck Brooks' essay, "America's Coming of Age," published in 1915 laid important parts of the terminological foundation for this movement by stressing the "organic" integration of art and life consummated in emancipated artistic vision, inspired by direct experience of the medium and its subject, social life, and controlled by a profound sense of craft and artisanal competence. Although, like Cram, Brooks searched for a viable historical model of the artistic behavior he deemed to be appropriate, he identified it in an American rather than European tradition constituting what he and others would later identify as a "usable past," uniquely suited to

---

[101] On the New York intelligentsia see Leslie Fishbein, Rebels in Bohemia: the Radicals of "The Masses" (Chapel Hill, NC, 1982); Pells, pp. 1-42. See also Green, pp. 3-45.

[102] Meyer Shapiro, "The Introduction of Modern Art in America: the Armory Show," in America in Crisis (New York, 1952), pp. 203-242, reprinted in Modern Art, 19th and 20th Centuries (New York, 1968), pp. 135-78.

[103] Pells, pp. 1-32. See also Lears, pp. 251-60.

contemporary American life by virtue of its association with the spirit of a "new" land and the reform of a "pioneer" spirit.[104]

The position to which Brooks' gave some methodological clarity was not without ambiguities of principle. Not the least of these ambiguities lay in its commitment to forging changes in human 'consciousness' on the one hand and its disregard for political activism which challenged existing institutions of government and business on the other. By the early 1920s, this rejection of politics as a medium of cultural change would distinguish Brooks' work from that of the more militant leftist writers and artists drawn to magazines such as the New Masses in New York City. Instead, Brooks envisioned cultural change effected by an artistic effort whose goal was to alter the inclinations of public thought. Indeed, as Pells has shown, Brooks inspired a coterie of writers and artists who believed that no alterations of existing political or economic institutions would have meaning without a prior change in the emotional and intellectual lives of Americans. The Brooks-inspired critique, Pells wrote, "stressed not so much (American society's) political corruption or economic inequities as its stupidity, aimlessness, and vulgarity." Thus the strategy of reform emphasized the intellectuals' capacity to make their appeals for cultural change directly to the public's "common sense" revealing the illogic and inhumanity of their cultural life rather than by catalyzing political dissent aimed at dissolving the distinctions of class.[105]

As an example of this strategy, Pells has identified a symposium conducted in 1922 and edited by Harold Stearns published as Civilization in the United States. The contributors, each critical specialists among whom was Brooks himself, presented material from their fields -- Brooks on literature, H.L. Mencken on American politics and others on education, advertising, art, and business -- demonstrating the persistent divisions between "theory and practice, ideals and

---

[104] Brooks would outline some of these terms in "America's Coming of Age," a text which both critiqued the lesion between artistic production and commercial life and searched for examples of a "usable past" that gave models of engaged artistic behavior. In looking to the past he identified the work of Walt Whitman which, he felt, overcame American pragmatism and the mechanical determinism of modern social life without rejecting the creative power of industrial culture. In the later writings of Lewis Mumford, both the terminology of the "usable past" and the criticism of the crudeness of the "pioneer" life would return. Van Wyck Brooks, "America's Coming-of-Age," in Claire Sprague, ed., Van Wyck Brooks: the Early Years, (New York, 1968), cited in Pells, pp. 6-8.

[105] Pells p. 21-23.

experience, culture and the market place."[106] Joining the group, the young critic, Louis Mumford, contributed one of the first of his many critiques of the American city in which he decried its senseless form and unnecessary concentration of people. Mumford wrote, "The highest achievements of our material civilization - and at their best our hotels, our department stores, and our Woolworth towers are achievements - count as so many symptoms of its spiritual failure." Despite what observers might claim about American achievements in building exemplified by these urban monuments, Mumford concluded, "the industrial city did not represent the creative values in civilization; it stood for a new form of human barbarism."[107]

Throughout the 1920s Mumford would diligently express a criticism of American culture grounded primarily on his observations of literature, architecture and urban form and borrowing on the critical model and terminology provided by Brooks. The Story of Utopias, which he claimed to have begun in 1912, offered a paradigmatic example. Ostensibly a review of literary utopias ranging from Plato to Dickens, Mumford concluded the text with a comparison of two social patterns depicting the cleavage of culture and work as a burden under which modern civilization suffered. On one side he depicted a 'utopia' of leisure represented by the "Country House." Unable by virtue of the social conventions to accept any responsibilities, "guests" enjoyed the delights of the place passively. Literature and art might flourish, but "as objects of appreciation rather than as the active creative elements in a community's life." On the other side, Mumford depicted the world of work as "Coketown", making obvious reference to Dickens' Hard Times, in which individuals had no time for the "appreciation" of the fruits of work and thus no opportunity for self-awareness and aesthetic improvement. Recalling the criticism of Ralph Adams Cram as well as Brooks, Mumford suggested that without the integration of the realms of artistic contemplation and productive work individuals would suffer a perpetual inability to produce "forms" inspiring and signifying moral and aesthetic uplift.[108]

---

[106] Ibid.

[107] Lewis Mumford, "The City," in Harold Stearns, ed., Civilization in the United States (New York, 1922), pp. 9-10, quoted in Pells p. 23.

[108] L. Mumford, The Golden Day: A Study of American Experience and Culture (New York, 1926), p. 279. The Golden Day was a companion volume to Mumford's 1924 book, Sticks and Stones. In it, Mumford picked up the theme of art and culture already apparent in the earlier text and applied it to American literary history intending to

Mumford pursued his critical enterprise in two companion works, Sticks and Stones: A Study of American Architecture and Civilization (New York, 1924) and The Golden Day: A Study of American Experience and Culture (New York, 1926), in which he attempted to document, as had Brooks, a "usable past," identifying architects and buildings on the one hand and writers, on the other, whose contributions and behavior offered good examples for contemporary Americans. Whereas literature represented the state of American "culture," architecture, he wrote, borrowing the phraseology of William Lethaby, was "the form of civilization."[109] To Mumford, buildings manifested a social structure and revealed information both about the relations of work that were necessary to form it and the communal relations which that the form sustained. The building or city that Mumford examined acquired importance as a vehicle -- a "crucible" -- of society rather than as an event or object in itself. For example, he wrote of the colonial period that,

> If we wish to tie up with our colonial tradition we must recover more than the architectural form. We must recover the interests, the standards, the institutions that gave the villages and buildings of early times their apparent shapes.[110]

Given this association between form and societal values, Mumford maintained that in defiance of the 19th century eclectic who could change styles to suit the 'character' of the building type, architecture could only change after the social and moral order of life itself had changed. "If we are to have a fine architecture," Mumford concluded, "we must begin...with the whole complex out of which architect, builder and patron spring and into which the finished building whether it be a cottage or a skyscraper is set. Once the conditions are ripe for good architecture, the plant will flower by itself."[111]

---

demonstrate that those writers who had imagined a "full American life" in their writing had forged an American literature which lived up to the potentialities of American culture. As in his architectural history, the writers he celebrated were mostly individualists such as Whitman, Emerson, Thoreau, Melville, who in his mind had forged out of the American experience an expressive form which was new and potent. Mumford's effort to create an American history and tradition coincides with those of other American writers and literary critics such as Van Wyck Brooks. One may interpret Mumford's work in architectural history as an extension of his literary interests and probably not the other way around.

[109] In his introduction to The Golden Day, Mumford described his study of American architecture as revealing the "form of American Civilization," a phrase he would later say he borrowed from the writings of William Lethaby. Mumford, Golden Day, p. 3. On his debt to Lethaby see also "Preface to Dover Edition" of Sticks and Stones (New York 1924; reprint 1955). In his inscriptions to Sticks and Stones, Mumford quoted Lethaby: "Architecture, properly understood, is civilization itself."

[110] Mumford, Sticks and Stones, pp.30-31.

[111] Ibid.

Like Brooks and other intellectuals within this circle, Mumford acquired some aspects of

his critical model from the writings of the sociologist, William Ogburn, who in the early 1920s

suggested that history depicted examples of cultural evolution pursuing the growth of

technology.[112] Cultural maturity, Ogburn claimed, indicated itself only when a society overcame

the spiritual and psychic forms of the past and achieved a new level of self-awareness which gave

individuals the capacity to exercise judgment in the use of their empirical knowledge and

technological ability. Until reaching this point, however, history demonstrated that a society

suffered from what he called a "cultural lag," the persistence of patterns of thinking about the

aesthetic, emotional, and ethical departments of life which were wholly incompatible with the

creative power unleashed by science and technology. Writers such as Brooks were inspired to

think that the cleavage between art and industry which they observed were themselves

manifestations of "cultural lag" and underscored the importance of their efforts to institute changes

in consciousness. The terminology of cultural lag reappears in Sticks and Stones. "Our difficulty,"

Mumford wrote, "is due to the fact that the human sciences have lagged behind the physical

ones."[113]

> All the little anomalies and inconveniences have come with machinery; not just
> because the machine is inherently wasteful and fraudulent but because our social
> order has not been adapted to its use.[114]

For Mumford, the specific form of cultural lag in the American context showed itself in

the persistence of the "pioneer" spirit, a broadly manifested tendency to confront the world as a

virgin and hostile territory to be conquered. Having arrived in an undeveloped "New World," the

first Americans stripped themselves of European civilization and set about settling the land with

innocent zeal. But, Mumford continued, "the pioneers who turned their backs on a civilized way of

life in order to extend the boundaries of civilization, left us with a heavy burden - not merely

blasted and disorderly landscapes, but the habit of tolerating and producing blasted and disorderly

---

[112] William Ogburn, Social Change (New York, 1922). On the relationship between Ogburn's writing and the work of Brooks and Mumford see Pells, p. 25.
[113] Mumford, Sticks and Stones, p.93.
[114] Ibid., p. 101.

landscapes."[115] This legacy revealed itself in both the unthinking productions of Americans who

"welcomed the smoke of the town" as a sign of "rural progress" and the artistic forms of the

"architecture of imperialism" which showed "the opulence, the waste of resources and energies, the

perversion of human effort" characteristic of American civilization.[116]

To overcome the lag of "human sciences", Mumford proposed a broadly based appeal to

the public through artistic activity and cultural criticism in the hope that they would perceive the

irrationality and inhumanity of the contemporary "forms" of civilization. As with Brooks, he denied

the necessity for political activism: at the root of Mumford's work in the 1920s was the belief that a

heightened sensitivity to the cultural dilemmas posed by the lesion of artistic sensibility and the

implementation of technology was sufficient to inspire the creation of new forms of social, political

and economic life. "Men will indeed work for an idea," Mumford wrote in The Story of Utopias, a

notion he pursued in the later Golden Day.[117] "The notion that the forces that are now dominant

will inevitably continue and grow stronger will not stand close examination," he observed. For

example, "Romanticism...gave men the liberty to breathe again."

> I do not say that the romantic poets changed the course of industrialism; but they
> altered the mood in which industrialism was received and quickened the
> recognition of its potentialities for evil which a blind and complacent
> utilitarianism might have ignored for generations.[118]

Mumford's claim of importance for both artistic emancip.. on and its relevance to the

elevation of a broadly manifested "consciousness" suggests affinities between his work and the

critical writing of the Chicago School of architects. The vocabulary supporting an "integration" of

art and work appeared in the writings of architects as well. We have already mentioned the case of

Cram who, through his medievalism, expressed a desire to return to a time when art was "integral"

with society. In his written praise for Wright's Imperial Hotel, Sullivan himself invoked the

vocabulary of "integration" and used architectural form as the medium through which was

communicated a new social consciousness. Sullivan described the plan of the hotel as

[115] Ibid., p. 96.
[116] Ibid., p. 69.
[117] Lewis Mumford, The Story of Utopias (New York, 1922), p. 244.
[118] Mumford, Golden Day, p. 247.

78

demonstrating the simultaneous resolution of two program areas, those of the "traveling public"

and those, "not only for the social obligations incurred by the Japanese official life in its contacts

with representatives of other lands, but also for the great social functions now inevitable in the high

life of the capital."[119] Sullivan observed how Wright had integrated these areas.

> Consequent upon the relation of these two groups there exists a most felicitous
> system of interpenetrations, and communications with a circulatory system, all
> worked out in a manner signifying not only mental grasp but creative
> imagination...[120]

In his critique, Sullivan reiterated the theme of the architect as one who completely controlled the

'idea' underlying the disposition of the building's program areas. But he also observed in the

"continuity" of spaces - in their interpenetrations - a new type of spatial planning which emphasized

horizontal extension and the opening up of one space into another. Wright modulated these

interior spaces with changing levels or "terraces," a device which, Sullivan suggested, reduced the

scale and "humanized" the interior of the building.[121] "The dispositions throughout the entire

building," Sullivan wrote, "are so dexterously interwoven that the structure as a whole becomes a

humanized fabric, in any part of which one feels that all pervading sense of continuity, and of

intimate relationships near and far."[122] The integration of these two areas and the structuring of

"relationships" that he observed implied that both he and Wright recognized a social dimension in

their work: with the aid of the program articulating two categories of users, Sullivan interpreted

this spatial continuity as indicating a kind of social continuity as well, a critical view which

broadened the implications for the vocabulary of integration advanced by Mumford.[123]

---

[119] Sullivan, "Imperial Hotel," p. 336.

[120] Ibid.

[121] Ibid., p. 342.

[122] "These differences of level are, in one aspect, a part of the charm of the work considered from the human point of view, and, technically, as a skillful method of deployment. They favor also the interpenetrations and the east accessibility of the larger units and, thus, the compactness of arrangement and economy of space." Ibid.

[123] The modern political position which Sullivan voices is elaborated in his opening paragraphs in which he describes the way in which "ideas" are formed and perpetuate themselves in contemporary society:

> On the vast stage of the world drama, two ideas, both of them immense in power, confront each
> other in spectacular appeal to the fears and the courage of mankind. The new thought partakes of the nature
> of freedom of which men have long dreamed. It is now breaking through the crust of the old thought which
> thus far in history has dominated the world of men and which embodies the idea of dominion and of
> submissive acquiescence. The old idea, or fetish, is dying because it no longer satisfies the expansion of
> thought and feeling of which the impressive relations of modern science are a primary factor; and especially

Mumford's audience among architects grew significantly after 1923 when he began to contribute on a regular basis to the AIA Journal at the invitation of its editor, Charles Whitaker.[124] It was through the Journal that Mumford -- together with Frederick Ackerman and Whitaker himself -- could begin to address his criticism of American culture directly to the audience in which he hoped first to inspire a conviction in his efforts to reinstitute the primacy of "human" values in the production of the built environment. Thus, he conveyed to architects his advocacy of a "modern consciousness" inspired by cultural activity, his claim of necessity for the location of a "usable past," his emphasis on the "use" of buildings as a subject of criticism and his desire that the professional architect work as a thoughtful steward of the built environment and as a sensitive

---

because it is no longer at one with those instincts we call human....Yet is the old idea tenaciously fixed in the minds of a majority of those engaged in commerce, the industries, the law, the courts of justice and especially among parasites of all kinds and degrees.

The old idea reaches from top to bottom of the social strata and also from bottom to top. It is an age-old fixed idea, based upon a concept of self-preservation, which once may have had an outward semblance of validity even though its stability of superstructure rested upon a foundation of human slavery, ignorance and suppression.

Sullivan's reference to base and superstructure, his claims that ideas emerge from a social structure and are related to the instincts of self-preservation demonstrate a heretofore unexpressed political awareness whose roots seemingly lie in a Marxian model of political history and economic structure.

Equally important is the fact that these platforms which Sullivan identified were facilitated by the construction technique that Wright used, a system conceived as slabs, "floating" on the unsound Tokyo soil. The system was developed to facilitate the construction of the building on the spongy Tokyo soil without driving piles through 60 feet to the bedrock below. Sullivan later celebrated Wright's building in 1924 which withstood a devastating earthquake in Tokyo that left much of the city in ruin. See Louis Sullivan, "Reflections on the Tokyo Disaster." AR 55 (February 1924), pp. 113-117.

The quality of spatial continuity was reinforced by Wright's design of an ornamental system of carved lava integrated into the wall planes which took on a "continuous, velvety shimmer." In this way, the building could be described as the consequence of a singular "vision", expressed in a "language vernacular and true" which integrated spatial, material and structural systems in one powerful statement of social and aesthetic conviction.

It is particularly interesting that this approach was characterized by Sullivan as one in which the liberties and freedoms of the individual were most clearly expressed. Whereas, one "idea", the "slave-idea", was manifest in "...a strange, ever-present disturbing fear, anxiety and incertitude, which permeates society and which leads the individual to cling for safety to the old ideas, superstitions and taboos, in order that he may conform and not appear too obvious as an individual, a target," the other was the "freedom-idea".

The idea of freedom also is beginning to permeate the thoughts of men, with a new urge, also through all the strata of society, and is massively defining, taking form and becoming energized through an ever-growing knowledge and ever increasing understanding of the true nature, the true status of man not as creature but creator. (pp. 333-334)

Thus, for Sullivan, the liberties taken in the design process were consistent with universal themes of intellectual liberty and social freedoms.

[124] Mumford's first article for the AIA Journal was "The Heritage of the Cities Movement in America: An Historical Survey." AIAJ 7 (August 1919): pp. 349-54. His next article was "The Architectural League's Exhibition." AIAJ 11 (March 1923): pp.111-13.

implementer of technology.[125] As a housing advocate and as a proponent of "regional planning" based on the work of his mentor, Patrick Geddes, as well as the model of Ebenezer Howard's "Garden City" projects, Mumford returned frequently to the theme of livable environments designed to highlight the quality of space, benefit from the relationship to the natural environment and stimulate communal life rather than to generate profit.[126]

Service and Self-Preservation: Reformulating the Professional Ideology

Mumford's agenda for "modern architecture" and the professional architect became part of a larger debate concerning professional practice that was carried out in the pages of the _Journal_ in the early twenties. Whitaker, Ackerman, Clarence Stein, Henry Wright, and Edith Elmer Wood wrote frequently in support of the architect's involvement in the formulation of a sensible housing policy formulated at a national level in response to the needs of the American working class and predicated on the assumption that by eliminating the profit-motive a level of clarity and sensibility could be restored to the design process.[127] Ackerman was perhaps the most diligent critic of contemporary practice and wrote of the importance of overcoming the "price system" in order to restore the primacy of the values of craft to the architect's work.[128] In both the _Journal_'s advocacy of large scale housing programs and Ackerman's critique of the profit motive, these writers outlined a new agenda for professional "service": rejecting both the symbolic program of "imperial architecture" which, as Mumford maintained, monumentalized institutions of power, and the demands for profit that displaced qualitative standards in building production, they advised

---

[125] See Lewis Mumford, "Architectural Piety," _AIAJ_ 11 (August 1923): pp. 304-6; "Our Modern Style," _AIAJ_ 12 (January 1924): pp. 26-7; "Architecture and History," _AIAJ_ 12 (July 1924): pp. 191-2. "The Imperial Age," _AIAJ_ 12 (August 1924): pp. 166-71 would later be reprinted with minor changes as a the chapter, "Imperial Architecture" in _Sticks and Stones_. On Mumford's work at the _AIAJ_ see also Lewis Mumford, _Sketches from Life_ (New York, 1982).

[126] See Lewis Mumford, "Regional Planning Schemes," _AIAJ_ 11 (October 1923): pp. 404-5; "Community Planning and Housing," _AIAJ_ 11 (December 1923): p. 492; "Report of the Committee on Community Planning," in _AIA Proceedings of the Fifty-Seventy Annual Convention, 1924_ (Washington DC, 1924), pp. 120-6; "Architecture and Broad Planning: Realities vs. Dreams," _AIAJ_ 13 (June 1925): pp. 198-99.

[127] This group began their advocacy of a national housing policy before and during the war. See reprints of their articles appearing in the _AIAJ_ during 1917 collected in Charles Whitaker, Frederick Ackerman, Richard Childs, Edith Elmer Wood, _The Housing Problem in War and in Peace_ (Washington DC, 1918).

[128] Frederick Ackerman, "Craftsmen-Machines-Credit-Speed," _AIAJ_ 11 (June 1923): pp. 249-52. Ackerman's position denouncing the profit-motive for certain industries was later adopted and advocated by, among others, the editors of the _New Republic_. Pells, p. 20-1.

architects to recognize a new constituency among ordinary Americans and to offer them buildings responsive to their needs, well crafted and sensitively placed in the environment.

These arguments developed within a social and political milieu that was energized by the vocabulary of industrial efficiency, disinterested management and collective bargaining and which seemed outwardly to offer a salutary medium for the ideas advanced by Ackerman and the contributors to the Journal. Both the success of Wilson's "War Boards" and the post-war anticipation of industrial reorganization sustained by the promise of the president's industrial "Peace" Conferences of 1919 and 1920 suggested that a new mediation of industrial excess would emerge with closer governmental scrutiny and an advocacy of labor rights.[129] Moreover, a new model of American leadership developed out of these and other national experiences during reconstruction personified by the engineer and management expert, Herbert Hoover, whose wartime activities as the director of American food relief programs transformed a political unknown into a national hero. Hoover, reserved and seemingly disinclined to accept excessive praise for his war work (which he spoke of as a "responsibility"), endeared himself to both the public and to intellectuals seeking a model for their own engagement in the reformation of American social and political life.[130]

As Gary Best has remarked, Hoover's public persona, his managerial successes and his incessant public lobbying for rational decision-making in politics and business helped to sustain an "ideology of engineers" in the early twenties.[131] Broadly educated, technically proficient and by nature practical, "engineers" exhibited a new kind of professional demeanor: the "engineer" implemented technology but his motivations for industrial efficiency were girdled by a scientific rationality and a commitment to disinterested management rather than profit. Thus, engineers represented suitable mediators of social conflict, unconcerned with the special interests of class or

---

[129] On the post-war industrial conferences convened by Woodrow Wilson see Valerie Jean Conner, The National War Labor Board: Stability, Social Justice and the Voluntary State in World War I (Chapel Hill, NC, 1983), pp. 173-80; see also, Jordan Schwarz, The Speculator: Bernard Baruch in Washington, 1917-1965 (Chapel Hill, NC, 1981).

[130] On the diversity of support for Hoover see Gary Dean Best, The Politics of American Individualism: Herbert Hoover in Transition, 1918-1921 (Westport, CT, 1975).

[131] Ibid., p. 103. Best has borrowed the term "ideology of the engineers" from the work of Edwin Layton. See Layton, The Revolt of the Engineers (Cleveland 1971).

their own accumulation of political or economic power and committed solely to the fair distribution of the goods and wealth produced by American industry. Unlike the social idealism and utopian imagery of Progressivism, Best points out, the "ideology of the engineer" offered reform achieved through practical means. Based on the public optimism this "ideology" generated, Hoover garnered wide support which spontaneously erupted from all quarters, liberal and conservative alike, and resulted in his being proposed as a possible presidential candidate for both parties in 1920.[132] Even Herbert Croly, now an editor for the New Republic, heaped praise on Hoover and the model of professional responsibility he depicted. Croly wrote that Hoover was a "providential gift to the American people for the office of pilot during the treacherous navigation of the next few years."[133]

The favorable sentiment generated by the "ideology of the engineer" colored the architectural discourse in the 1920s. Architects offered descriptions of the "professional" that recalled the image of high-minded artistic solidarity described by Herbert Croly before the war. At the same time they absorbed the ideas disseminated by the Journal and best represented in the work of Lewis Mumford that focused on the cultivation of a modern consciousness with which to overcome the dilemma of the lagging "human sciences." But they also embraced the model of pragmatic engagement of industrial processes personified by Hoover whose own efforts to forge a "modern consciousness" were rooted in a desire to cultivate a popular commitment to industrial expansion. The spirit in which architects conceived their roles as agents of social reform is suggested in the report to the AIA convention by its delegate to an interdisciplinary professional conference sponsored after the war. Henry Holsman, President of the Illinois Chapter of the AIA, suggested that professionals (architects among them) wielding "truth, knowledge and science" should organize themselves as a legitimate "social class". Only then, by participating directly in social processes, would they be able to realize their full social value: "able to weigh and balance

[132] Best, p. 103.

[133] Herbert Croly and Walter Lippman, "Editorial," New Republic, (March 3, 1920): p. 30. Best, p. 62.

contending principles of the opposing classes [the laboring class and the capitalist class], to survey

and evaluate the motives of action and reaction and to render a just balance between the two."[134]

At the same time, the professional discourse reveals the great interest expressed by

architects in the 1920s in their own capacity to work toward greater efficiency in the building

industry. In a series of editorials in 1919, Charles Harris Whitaker outlined the industrial field in

which architects worked and in which they -- in similar fashion to "engineers" -- maintained an

ability to "manage" production.

> Let us begin at the beginning; let us assume that building is an industry. No
> architect will deny that. Nor will he deny that it is an industry which touches
> almost all other industries. Therefore, architecture cannot be considered as an
> industrial problem by itself; it is a part of one great industrial problem[135]

Examining the field of architectural work, Whitaker concluded that the first step in the effective

execution of the professional's service was to reconfigure the "relationships" he shared with other

key members of the building process.

> It is this problem of relationships which must be solved....Architecture is based
> upon the right doing of the work undertaken in its name. There can be no right
> doing without right relationship. This means that the architect must be in right
> relationship with client, contractor, subcontractor and all those who put their
> labor into his building. He must be in right relationship with all those who have
> put their labor into the materials that go into each building.[136]

Thus, rather than focusing on the product of his efforts, Whitaker advised that the architect

address his efforts to the reorganization of the working relations in which he found himself with

the goal of increasing the efficiency of building production.

Within this intellectual climate, the commitment to industrial efficiency shifted the focus

of architectural work from its aesthetic and formal content to the methods of production. A priori

"truths" such as those embodied within the aesthetic theories of academic eclecticism held little or

no value in the face of the relative "truths" of engineering, construction schedules, real estate

markets and the like. Neither was this aspiration affiliated with the "relativism" of the romantic

styles described before the war by Van Brunt or Montgomery Schuyler for its focus was not

---

[134] Reported in the article, "A Pertinent Question," AIAJ 7 (December 1919): p. 545. "Laboring class" and "capitalist class" are Holsman's own terms.

[135] Charles Harris Whitaker, "Shadows ans Straws," AIAJ 7 (April 1919): p. 144.

[136] Ibid., p. 145-6.

building form but building production. A demonstration of the implications which this held for the

formulation of architectural theory is expressed by an exchange between Charles Moore, Professor

of Fine Arts at Harvard College (and author of the above-mentioned The Promise of American

Architecture), and an architect, Harold Lawson, which appeared in the pages of the Architectural

Record in 1921. In an article on the education of the architect, Moore discussed the way in which

aesthetic conventions were established and perpetuated through time. He noted that aesthetics

were simply the consequence of many centuries' effort in which a conventional response to the

structural necessities of building materials -- especially stone -- were standardized in typical formal

solutions. In the course of his ruminations on "modern" architecture, Moore made a plea for the

program of training of the young architect, claiming that the current emphasis on engineering and

science was merely a diversion from the real concerns of the architect which were primarily

aesthetic.

> We forget that no architect of the great ages of architectural design had any
> knowledge of the science of building in the modern sense. Design and
> construction in architecture are governed by tradition, imagination, artistic
> aptitude and practical experience, more than by science or by any such knowledge
> as the collegiate schools impart.[137]

Moore went further to say that any effort to learn "science" in order to be able to design a

"modern" building using, for example, the steel frame would work against the individual's efforts to

learn "architecture."

Moore's article drew the response of Harold Lawson several months later whose letter,

entitled "Is Steel Frame Construction Capable of Architectural Treatment?" suggested that if the

architect failed to become involved in new construction techniques he would eventually be

displaced by the engineer. Lawson suggested that there was a practical incentive to become aware

and adept in new forms of building technologies.

> Mr. Moore claims the present use of steel and iron comes of no needs of
> architecture. There is no reason why it should. It is not architecture which has
> determined the use of these materials, but modern economic conditions; and if
> architecture is to live and flourish, it must obey and conform to modern economic

---

[137] Charles Moore, "Training for the Practice of Architecture," AR 49 (January 1921): p. 58.

needs...Shall the entire designs of building containing steel be left to structural engineers and contractors?[138]

Moore's subsequent reply to Lawson demonstrated his persistent conviction in the autonomy of architectural aesthetics from conditions of practice.

> Mr. Lawson thinks that modern economic conditions make the use of what are called modern methods and materials imperative....But if it be true, as he rightly affirms, that "it is not architecture that has determined the use of these materials," it should be obvious that they are not suited to its needs; and to imagine that architecture can live and flourish on unsuitable materials seems to me a mistake. Only mechanical engineering can live and flourish on the modern economic methods of building; and should these methods ultimately prevail, the vocation of the architect would be superseded by that of the engineer.[139]

Moore's response was based on his experiences prior to the war. He could recall the privileged position that architects had held through the good graces of their patron/client which made it possible for Moore to discuss architecture, like Royal Cortissoz before him, in isolation from practical dilemmas posed by the economics of building technologies or material constraints. Lawson, on the other hand, was inclined to cross over the line between economics and aesthetics. In Lawson's mind technology, validated by economic conditions, set the parameters within which the architect was forced to work. Moreover, the architect was compelled to work within these parameters lest he be excluded altogether from the construction industry.

Lawson's willingness to accept these conditions of practice demonstrates an essential aspect of the "modern" view with which architects engaged in their work at the beginning of the 1920s: the parameters of architectural practice, like all activities associated with modern industry, were given by the economic factors associated with building production. This sentiment, always more or less present among practicing professionals, became more pronounced in the wake of World War I by the reduction of private work before and after the armistice.[140] The methods of reconstruction suggested by both the Wilson administration and that of Warren Harding also recognized large-scale industrial and labor organizations as the fundamental components of the industrial economy. Having lost their mandate to service patrons highly placed in government or

---

[138] Harold Lawson, "Is Steel Frame Construction Capable of Architectural Treatment?" AR 49 (April 1921): p. 375.

[139] Charles Moore, "Reply," AR 49 (April 1921): p. 376.

[140] We will discuss the conditions of practice following WW I in greater detail in the following chapter.

business, architects confronted a terrain of work not only dominated by large and impersonal organizations but whose dynamism derived from a broadly accepted goal of economic expansion facilitated by managers and experts seeking higher rates of efficiency in the areas of production, distribution, and consumption.

Although architects expressed a solidarity with the "ideology of the engineer," they also demonstrated a fear of its implications for their own work. Not only did the focus on industrial efficiency challenge their traditional canons of practice but it also brought into question their necessity to the building industry. The architect, Richard Wallace Tudor, voiced this fear when he noted in 1920 that "the larger and more aggressive business organizations are gradually taking over not only the operation of financing and construction but also are performing the architectural services involved." He continued:

> A fairly clean cut divergence in interest has arisen between the so-called "principles" of architectural practice and the so-called "principles" underlying modern business enterprise....Within a few years, from a position of relative security and a relatively beneficent rating which was coming to be assigned to his services, [the architect] suddenly awakens to a realization that his hopes are possibly to be rudely shattered by the ever-broadening activities of businessmen who are aggressively engaged in the modern-businesslike activity of gradually taking over the architect's business as part of the act of gaining control over all production....The architect may attempt to hold firmly the position which he now occupies, in which case he is more than likely to fail, particularly if he holds to that group of ideas that has worked for the establishment of the position he now holds.[141]

Tudor's choice of words provides us with a key to understanding the relationship he imagined to exist between professional theory -- the "principles" of practice -- and the actual circumstances in which architects worked. On the one hand, Tudor described "ideas" as "working for the establishment of a position." "Ideas" functioned in the professionals' attempt to procure a social status with "security" in which the value of their skill and knowledge was preserved.[142]

Tudor also suggested that Americans collectively expressed their conviction that the architect's

---

[141] Richard Wallace Tudor, "The Architectural Profession in the Present Day," AIAJ 8 (March 1920): p. 127.
[142] The value of professional knowledge is preserved both by the action of professionals to exclude from the terrain of their expertise individuals possessed of other, related or overlapping forms of knowledge and by their ability to demonstrate the necessity of what it is that they do for society at large. Thus, at a certain point in their development, professionals attempt to redefine their work according to perceived social needs while they avoiding overlap with other types of expertise.

services were relevant to their welfare. Through their work architects fulfilled some social expectations. The "principles" of practice therefore satisfied two related requirements: first, they described work that the architect was capable of performing; second, they described the architect's work in ways which corresponded to the tasks that the his clientele deemed to be essential.

The effort to strategically configure architectural practice to the perceptions of "need" expressed by a building industry manifested itself in a movement with widespread support among practitioners coordinated by the AIA administration and heralded in the formation of a task group officially designated the "Post-War Committee."[143] Convened in 1919 to address the future of architectural practice, the Committee first fixed its attention on what it regarded as the "real" conditions of professional practice, dominated as it was by the industrial character of building production in the United States; and then determined to revise the canonical interpretations of architectural "service." "Until architects are willing sincerely to measure and to evaluate the actual facts surrounding the building industry as carried on in the modern world in which we live," the committee's preliminary statement proposed, "they must remain ignorant of the exact position which they occupy and the exact direction in which their profession is going. A recognition and understanding of these conditions will enable architects to increase the value of their service and realize in greater degree, the ideals toward which they are striving."[144] Over the course of the year the committee canvassed AIA members to get a better sense of the professional's state of mind and then concluded by advising that the architect should pay closer attention to the dilemmas of inefficient production brought about by the poor management of the work that went into the building process.[145]

Five years after it convened its Post-War Committee, the AIA sponsored a symposium at its national conventions at which the design canon of academic eclecticism was openly challenged as inappropriate to the "modern" era. Contributors made familiar arguments, proposing that without a "modern" style, American culture would be lost in historical time. For example, the

---

[143] We will examine the work of the Post-War Committee in greater detail in the following chapter.

[144] "Post-War Committee on Architectural Practice," AIAJ 7 (January 1919): pp. 6-7.

[145] "Post-War Committee - Preliminary Outline of Programme," AIAJ 7 (January 1919) p. 7.

coordinator of the event, H. Van Buren Magonigle, advised that architects should remember their "responsibilities as the pilots and guides of a new generation of mankind" to shed "lustre on this, our generation."[146] Beside Magonigle, Ralph Adams Cram voiced his cultural critique deriding the commercial values of "big business" that prevented the emergence of an "integral" relationship between artistic intuition and work. But, in addition to these positions, contributors began to suggest that the real motivations for architectural work derived not from cultural responsibility or historical judgment but rather from the context of their work which itself defined the role that architects could play in the building industry. Thus, William Steele suggested that architects should design according to the parameters of "utility and convenience" in order to legitimately assume responsibility for utilitarian structures.[147] Some speakers, recalling the design models offered by Sullivan, proposed that architects celebrate work which derived its form from the elemental conditions of material and program. "Architecture and the profession of architecture would, I believe, win greater authority and command a greater popular interest," W.R.B. Wilcox remarked "if...the work of architects who deny the authority of formal precedent was judged with sympathy. If it might be thought to aim for the same goals as that of their critics -- that goal which is pleasing form, proper use of materials, fitness of ornament, harmony of color, appropriate scale, dignity, simplicity, and convincing character." But at the same time that Willcox proposed a fundamental relationship between this design method and those which relied on historic styles, he also observed another parallel between the design of buildings and industrial products such as automobiles, noting that they were both "expressions of practical utility."[148]

This new perception of practice as a mode of industrial organization whose products were frankly utilitarian designated a modern professional consciousness quite different from that which Mumford had hoped to elicit. Whereas Mumford's effort to inspire a modern consciousness grew out of his desire to overcome the pragmatism of the "pioneer" and to set humane limits to the use of technology, professionals such as Tudor and Lawson projected a new self-awareness grounded

[146] H. Van Buren Magonigle, "Plagiarism as a Fine Art," AIAJ 12 (June 1924): p. 260.
[147] William Steele, "The Use of Precedent in Architectural Design," AIAJ 12 (June 1924): p. 266.
[148] W.R.B. Wilcox, "What is the Use of Precedent Doing to American Architecture," AIAJ 12 (June 1924): p. 269.

in the recognition of the "industrial" nature of building production and their own ability to work for its increased efficiency. Whereas Mumford had invoked the terminology of "use" and "function" to denote both the immediate activities as well as the larger social purpose of buildings and communities, architects such as Wilcox regarded these as standards of performance against which to test the efficacy of the design process.

It was hardly a coincidence however that the terminology was shared. In the rush to respond to new conditions of practice, it is evident that architects were searching for a working methodology and a supporting theoretical framework which was attuned in one way or another to the realities of practice. Thus, it did not appear as an inconsistency that Mumford and Ackerman were proposing a thorough reorganization of American economic life while writing for the AIA Journal at the same time that the AIA's Post-War Committee, charged with the responsibility of plotting the course of the Institute's activities in the midst of reconstruction, advised a capitulation to the facts of the modern construction industry.

The schism between the professional canons, forged in response to the conditions of practice, and the discourse of modernist intellectuals like Mumford who persisted in their advocacy of a "modern consciousness" predicated on a new humanism, persisted throughout the 1920s. Without an explicit and autonomous language, Mumford's "cultural" criticism gradually dissipated in the face of a powerful professional ideology that linked itself to industrial management. Thus, while the modernists' reaction to historical eclecticism helped to dislodge the canons of aesthetic idealism, their "cultural" agenda had little influence in the efforts of architects to integrate themselves into a broader "industrial" complex by striving to create an efficient and profitable building industry, servicing the agenda of urban expansion and seeking an architectural vocabulary that borrowed from and enlarged upon the language of advertising. In the following chapters we will consider each of these categories of architectural work separately, examining the architect's

---

[149] Mumford himself admitted to a gradual dissaffection for architecture as a medium of cultural rebirth. Attesting to this, he later wrote, "Hitler had...won the war. Well before the end, Nazi methods had infiltrated the minds and plans of his enemies and had begun to dominate the science, the technology and the politics of the so-called Nuclear Age. I did not think that architecture, as the favored masters of modern form still conceived it, would serve as an instrument of our salvation." Lewis Mumford, Sketches from Life (New York, 1982), p. 437.

relationship to the speculative building project, the evolving strategies of urban planning, and the efforts to socialize consumption that characterized an emerging commodity culture. But first we must examine the professional institutions by which the new standards of practice were disseminated and canonized.

Chapter Two: Redefining and Instituting the Conventions of Professional "Service", 1919-1925

> Since the days when all craftsmanship was based upon the professional idea, we
> have seen most of the arts and all of the crafts absorbed by centralized industry.
> Architecture, the all-inclusive art, has resisted this process of absorption, and yet
> when we look upon our cities and see the tremendous volume of building built
> only to sell, we must recognize the fact that centralized industry has made great
> inroads on the practice of architecture.[1]

AIA Post-War Committee (1919)

> Class consciousness is the chief reason for the existence of any professional
> organization.[2]

Henry Holsman, President of the Illinois Chapter of the AIA (1919)

In the wake of World War I, Americans ascribed an emancipatory power to well-managed

industry, suggesting that it was capable of instituting a social order based on the equitable

distribution of commodities and capital. A new model of leadership depicted by the industrial

manager inspired this optimism: symbolized by Wilson's "War Cabinet" and the "dollar-a-year-

men" who emerged from private industry to serve without compensation on the staffs of the War

Industries Board, the National War Labor Board, the Emergency Fleet Corporation as well the

administrations of transportation, food and fuel, the promise of this leadership was foretold in its

ability during the war to prevent fluctuations in production and prices by which it had won the

battle -- widely publicized by Wilson -- for "democracy." In the face of the tasks of post-war

reconstruction, the public expressed enthusiasm for the strategies of management that Wilson's

administrators had applied. Rational administration based on information exchange, the

centralized control of prices and standardization heralded a pattern for recovery.

After the war, American architects also adopted the popular rhetoric of this industrial

recovery program and pronounced that their own activities formed a part of a larger "building

industry" serving society's needs. The implicit rationale of this emerging professional ideology was

clear: the legitimacy of their professional status depended on their ability to demonstrate that their

---

[1] "Post-War Committee on Architectural Practice," AIAJ 7 (January 1919): p. 7.

[2] Henry Holsman, "The Professional Idea in Architecture." AIAJ 7 (July 1919): p. 333.

work served some social purpose; confronted by the demise of the White City Movement, on the one hand, and the changing character of industrial and political leadership on the other, architects were searching for a new professional mission. Thus, beginning in 1919 architects affiliated with the American Institute of Architects openly pledged themselves to a model of "service" which placed high priority on their ability to induce 'efficiency' in the building industry through their technical and administrative skills.

In portraying their work as managerial, architects accepted a new social status for themselves, one in which their professional lives were no longer characterized by their privileged access to economically and politically empowered individuals. The new relations in which architects found themselves were mechanical rather than intimate, determined by the perfunctory demands of the anonymous administrative leadership in business and government they presumed to service. Architects described the pattern of these relations of work as a horizontal and interdisciplinary matrix occupied by engineers, contractors, financial experts as well as labor representatives which displaced the vertically hierarchical chain of authority formerly surmounted by the 'artistic' license of the architect.

As their occupational network increased in size and complexity, architects became dependant on the AIA as a vehicle for their participation in the processes of economic and political decision-making.[3] In response to these circumstances, the directors of the Institute developed its organizational structure, improving its effectiveness and the breadth of its activities as a lobby group working with the building industry and federal government.[4] They added committees to

---

[3] The Society of Beaux-Arts Architects, which had rivaled and superseded the AIA between 1900 and 1915, functioned as an exclusive and elitist organization whose cachet lay in its membership of celebrated and well-educated architects. The post-war environment demanded a new form of representative body, one which derived its authority from the size of its constituency.

[4] Several recent studies have examined the AIA between its founding in 1857 and the period of its greatest subsequent activity in the 1890's when it functioned as the primary lobby for the Tarsney Act. See especially, Andrew Saint, The Image of the Architect (New Haven, 1983); Sibel Dstoglu, "Toward Professional Legitimacy and Power: An Inquiry into the Struggle, Achievements and Dilemmas of the Architectural Profession" (Ph.D. diss., University of Pennsylvania, 1982); Turpin Bannister, The Architect at Mid-Century: Evolution and Achievement (New York, 1954); and Henry Saylor, "The AIA's First 100 Years," AIAJ (May 1957) whole issue. Little attention has been paid by historians to the Institute in the 1920's and later. This is perhaps due to the greater anonymity of the organization during this period: in contrast to its intimate association with professionals such as Richard Morris Hunt, Charles McKim and Daniel Burnham during the late nineteenth and early twentieth centuries, the AIA had no figurehead as president during the twenties.

canvas for support of the private architect in his efforts to receive commissions for new work undertaken by the government. They attempted to construct direct lines of communication with the Commerce Department, seeking involvement in government-initiated studies such as the reform of building codes and the standardization of materials and construction techniques. They established unprecedented relations with private industry by cultivating the AIA's affiliations with materials manufacturers and their representative associations, contractors groups and other professional organizations. Simultaneously, they endeavored to expand the size of the Institute's membership, attempting to create an organization truly representative of all practicing architects.[5]

In their efforts to establish a greater solidarity among architects, the directors of the AIA reached out to its members through its conventions, magazine, and frequent "circulars" of advice on practice. Through the Institute's contracts, its recommendations on management techniques, and its sales pitches on behalf of the architect, they defined the legal and economic responsibilities of the professional that followed from the new conception of "service." Its organs of communication strengthened, the Institute managed both the architect at work and the pace of change as the profession re-invented its definitions of service after WW I.

The Professional during World War I and the Post-War Reconstruction

The mobilization for World War I organized by the Wilson Administration between 1917 and 1919 altered the working conditions of American architects. They, like other citizens, were exposed to the aggressive propaganda extolling patriotism and sacrifice in the interest of the war-effort. In their personal lives, they encountered the rationing of food and clothing and the limited production quotas that Wilson placed on non-essential commodities. Professionally, they endured Wilson's efforts to focus American productive potential on the war-effort which drew materials and manpower away from private building activities. In carrying out his wartime plans, Wilson finally

---

[5] An exclusive organization with stringent entrance requirements before WW I, the Institute set out in 1919 to enlarge its representation of practitioners. Under the rubric of "democratization" which portrayed its expansionist policies as being driven by the desire to give all American architects a voice in the re-definition of practice which followed the war, the Board of Directors authorized numerous membership drives and simplified the admissions process. See Saylor, whole document.

imposed a moratorium on all building construction not directly related to the war-effort in May of 1918.[6]

In contrast to the architect, Americans working in many industries experienced an expanding market for their work and the commodities it helped to produce. In fact, so great was the government's demand in certain key industries -- shipbuilding and armaments in particular -- that the existing production capacity was insufficient. By the end of 1917 it was apparent -- Wilson's desires to limit a war-induced industrial expansion notwithstanding -- that these industrial sectors required capital investments in order to boost their production potential. Responding to this need, Wilson's war managers provided credit to private industrialists to finance the fabrication of new machinery and buildings.[7]

Few architects benefited professionally from the investments that the Wilson administration made in industrial expansion. Governmental subsidies and loans financed only the construction of buildings that played a vital role in production such as factories, warehouses, worker housing, and components of the transportation network. For the most part, architects affiliated with the AIA did not possess the qualifications for this type of work. Among those that did, the Detroit architect, Albert Kahn, was an exceptional example. A German-Jewish emigre who had cultivated a reputation as a designer of factory buildings for the emerging automobile industry, Kahn began work in January of 1918 on the design of a new plant commissioned by Henry Ford and financed by the federal government intended to house the assembly line for the mass-production of submarine chasers for the U.S. Navy. The plant, built at Ford's new River Rouge site outside of Detroit, was a single story steel frame construction containing over 400,000

[6] Andrea Dean, "Seventy Five Years of American Architecture," Arch (December 1987): p.76.; See also Bannister; Saylor; and Jordan Schwarz, The Speculator: Bernard M. Baruch in Washington, 1917-65 (Chapel Hill, NC, 1981), p. 86.

[7] On Wilson's wartime planning see Schwarz; Barry Karl, The Uneasy State: the United States from 1915 to 1945 (Chicago, 1983); William Becker, The Dynamics of Business Government Relations: Industry and Exports, 1893-1921 (Chicago 1983); Robert Cuff, The War Industries Board: Business Government Relations during World War I (Baltimore, 1973); and Gary Best, The Politics of American Individualism: Herbert Hoover in Transition, 1918-1921 (Westport, CT, 1975).

square feet of floor space (fig. 2.1). Kahn oversaw the completion of drawings and construction in less than five months.[8]

The opportunities that the war-time expansion offered to Kahn were as unusual as was his career and practice among his architectural peers. Kahn stood outside of the mainstream of the AIA, having had no formal training and leading an office which offered services in architectural design as well as structural engineering.[9] Moreover, although Kahn's industrial buildings were well conceived and powerful statements of the potential of a straightforward and unadorned use of concrete and steel construction technology, the aesthetic standards by which they were judged did not place a premium on, as Moritz Kahn, Albert's brother, would later write, "a snappy looking, symmetrical plan" or a "Beaux-Arts elevation." "The sole purpose of a factory building," Kahn's brother stated, "is efficiency and economy of production so that the greatest possible yield is returned on capital outlay."[10] Thus, the war-effort prioritized categories of building whose design criteria were inconsistent with the dominant modes of pre-war architectural practice characterized by the work of Ecole-trained professionals.

AIA members lamented their failure to get work as privately practicing professionals during the war. In part, they were troubled by their inability to perform a valuable "service" that satisfied the demands for self-sacrifice made by government propaganda. Thomas Kimball, President of the AIA between 1917 and 1922, spoke of the "unrest" that this caused among unemployed professional architects arising "from dissatisfaction...with the character of the war-service rendered by the profession and its relation generally with other professions and the general public."[11] They also expressed anxiety over their failing practices, a by-product of their inability to provide a "service" for which they might be compensated. As an indication of destitution among

---

[8] Grant Hildebrand, Designing for Industry: the Architecture of Albert Kahn (Cambridge, MA, 1974), pp. 20-26, 127, 132.

[9] Hildebrand, pp. 20-26, 127, 132. Kahn refused to hire college graduated architects because he felt that they were unqualified for work in his type of practice.

[10] Moritz Kahn, "Planning of Industrial Buildings," AF 51 (September 1929): p.265.

[11] Kimball in a discussion of his proposals for post-War examination of the profession, Minutes of the Executive Committee, November 17, 1918, p. 6, AIA RG 510-2.

practitioners in 1919, Charles Whitaker reported that a mere 8% of AIA members had filed

income tax returns in the previous year.[12]

Having been forced to make dues optional during the war because of the large number of

members in arrears, the AIA leadership was sensitive to the plight of privately practicing

architects. Committee chairs and officers of the Institute lobbied the federal government for the

creation of work opportunities for these practitioners, sending memos to officials in the Armed

Services and in Wilson's administration in which they outlined the abilities of professional

architects and recommended ways in which they could be engaged. These professional advocates

couched their proposals in terms suitable to the moment. In the last months of 1917, for example,

Kimball issued two reports, one on industrial housing and another, "An Analysis of the Building

Situation," that portrayed the abilities of the AIA membership in language more appropriate to the

work that Albert Kahn had done for Ford, stressing their capacity to plan buildings which were

economical to build and efficient to use.[13] Kimball's efforts to get work for private practitioners

revealed his willingness to let political opportunities define his arguments on the architect's behalf.

For example, by the end of 1917 President Wilson had made it clear that he intended to stimulate

some industries with direct subsidies for the construction of new buildings.[14] Kimball prepared an

open letter entitled, "The Institute's Offer to the President," that was published in the Journal at

the end of that year. In it, he pledged architects to the task of studying and improving

governmentally sponsored building projects by increasing the utility of their plan organization. He

also recommended the hiring of private architects as design efficiency consultants by those

government agencies that oversaw private sector building or that had their own building

programs.[15]

---

[12] Charles Whitaker, "Post-War Committee - Preliminary Conclusions," AIAJ 7 (September 1919): p.390.

[13] Executive Committee Minutes, January, 1918, p. 14, AIA RG 510-2.

[14] Wilson reported the formation of the Emergency Fleet Corporation in 1917 whose responsibilities would be to stimulate the production of new freighters for the American Merchant Marine. United States Department of Labor, Report of the United States Housing Corporation (Washington DC, 1919); see also Richard Candee. Atlantic Heights: A World War I Shipbuilders' Community (Portsmouth, NH, 1985). See also following chapter for a more detailed discussion of wartime housing and factory building undertaken in the shipbuilding and armaments industries.

[15] Thomas Kimball, "The Institute's Offer to the President," AIAJ 5 (December 1917): pp. 641-3

Wilson's subsidies for construction in key industrial areas did produce notable

opportunities for some AIA members besides Albert Kahn. Most significantly, several prominent

professionals including Frederick Ackerman and Robert Kohn (who would become AIA President

between 1930 and 1932) participated in the work of the Emergency Fleet Corporation and the U.S

Housing Corporation on the production of worker housing and new towns.[16] However, these

opportunities, though significant, were limited to a small group of housing specialists who had

gathered around Charles Whitaker and the AIA Journal and their involvement with governmental

building programs meant, by and large, that they worked as members of a governmental

bureaucracy rather than as private practitioners.[17]

With its institutional interests behind the private practitioner, the AIA argued against this

type of governmental work.[18] In 1918, Frank Miles Day, chairman of the newly founded AIA

Advisory Committee to the Council of National Defense, maintained in a report to the AIA

Executive Committee that governmental departments and bureaus responsible for construction

were not suited to the organization of housing and building projects during the war. Only

architectural firms experienced at working in the private sector and accustomed to the constraints

of limited budgets and close scrutiny of prices, Day argued, had the organizational capacity to

handle work "under conditions of speed and economical cost." The special abilities of the private

practitioner, he asserted, "should be utilized to the full in this emergency just as the Government

has already utilized its industrial resources." By associating the architect's abilities with industrial

capacity, Day's comments implied that the Wilsonians, in their efforts to expand the architectural

services performed by the government, had violated their stated aim of employing only existing

---

[16] For a list of architects employed by these agencies see "The Housing Division of the Emergency Fleet Corporation During the War," AIAJ 7 (January 1919): p.41; "The United States Housing Corporation of the Department of Labor During the War," AIAJ 7 (February 1919): p.59.

[17] These agencies hired outside consultants as well as using their own staffs of architects, draftsmen and civil engineers.

[18] The criticism by the AIA of government architects was long-standing. Federal work, long organized through the Office of the Federal Architect, an agency of the Treasury Department, was frequently closed to private architects. One of the first tasks assumed by the AIA was that of lobbying for the ability of private architects to compete for design work on these projects. In 1916, the AIA Executive Committee acknowledged that despite their continued efforts to get architects involved in governmental projects, the only cordial relationship with the government was with the Office of the Postmaster General. See Executive Committee Minutes, October 13, 1916, p. 139, AIA RG 510-2.

industrial capacity to satisfy the war need. Rather, Day concluded, the government should focus its efforts on rendering the working relationship between the private architect and government more efficient. To that end, he recommended that the AIA form a standard contract for the architect working as a consultant to the government.[19]

Despite these efforts, AIA members expressed dissatisfaction over the character and quantity of their war work. At the AIA Convention in 1919, the Board of Directors celebrated their receipt of a letter from the Camouflage Section of the American Army that acknowledged the help that architects had provided in formulating paint colors and patterns.[20] A year later at the Convention of 1920, President Kimball derided this as an example of the architect's service: "Can it be that threadbare word "camouflage" is to be our legacy from the War?" "It would be paradoxical," Kimball continued, "to include the ending of the war among things to be deplored, yet there is no denying that the signing of the Armistice brought to a sudden close a period of great mental activity and promise" without providing architects with the opportunity to prove the value of their "service."[21]

The first two years of post-war reconstruction merely fueled Kimball's morbid pessimism, yielding little evidence that the demand for the services of architects would soon grow. The Wilson administration held firm to its position that the government-sponsored industrial organization had been a temporary measure necessitated by the emergency of war and publicized its efforts to carry out the "readjustment" of American industry to a peace-time economy in 1919.[22] But, a recession in that year followed by a rapid and unexpected inflation of prices in 1920 curtailed new

---

[19] Executive Committee Minutes, January 17, 1918, p. 10, AIA RG 510-2. Day was responsible for the compilation of the AIA's _A Handbook of Architectural Practice for Use by the AIA in Connection with Its Standard Documents_ (Washington DC, 1920) which included separate chapters outlining the recommendations to architects on management of their offices, outlines of standard work procedures, contracts, legal suggestions. The handbook was first published in 1920 and provided one of the most comprehensive outlines of standard practice ever available to architects.

[20] "52nd Annual Convention," _AIAJ_ 7 (April 1919): p. 197.

[21] "Address of President Thomas Kimball, 53rd Annual Convention of the Institute," _AIAJ_ 8 (June 1920): pp. 220-222.

[22] True to its belief that the war-effort could be supplied by existing industrial capacity without expansion, a mode of reasoning inspired by Wilson's hope to avoid a disruptive return to a peacetime economy, the Wilson administration spoke of a "readjustment" rather than reconstruction. Wilson desired that the post-war economy would require only a marginal refitting of industry to manufacture products consumed by the general public rather than by the military. See Schwarz, pp. 98-107.

construction and dampened the hope for a quick and easy post-war recovery. Labor unrest

indicated by strikes in the steel and transportation industries as well as the notorious Boston Police

Strike put down with military force by Calvin Coolidge suggested that a new era of

worker/capitalist antagonism had opened, stifling the prospects for what Warren Harding,

Wilson's opponent in the 1919 presidential elections, called a "Return to Normalcy." Violent

revolution in Russia also raised the specter of a worker uprising in the United States as did the

increasing militancy of labor unions at home. The founding of the Communist Party in Chicago in

1919 merged in the popular view with the "Palmer Raids" on January 1, 1920 in which suspected

party sympathizers were arrested in a nationwide sweep to further incite a public hysteria.[23]

In the midst of this economic and political turmoil, some industrial leaders such as Judge

Elbert Gary, President of U.S. Steel, opposed Wilson's program of readjustment, desiring instead

to maintain the governmentally supervised industrial cooperation that had permitted what would

otherwise have been unconstitutional price fixing during the war. Less opportunistic industrial

leaders together with several of Wilson's closest war-time advisers also regarded the post-war

period as one in which to test the efficacy of government-sponsored industrial "associations," the

voluntary organizations of industrial managers intended as vehicles for information exchange and

self-regulated standardization of methods and products. During the war, the expressions of

allegiance to the principles of "voluntary cooperation" had involved equal amounts of pragmatism

and idealism: among the Wilsonians, the publicists of voluntary cooperation expressed the belief

that capitalists could be compelled by logic and patriotism to place the needs of the nation at war

over their own limited and individual desires for profits. Now, in the wake of the war the prospect

emerged for an "associative state," a matrix of quasi-public industrial interest groups shepherded by

the federal government as envisioned by Herbert Hoover and Bernard Baruch. Appealing to a

similar social idealism as had voluntarism, the associative state signified a new potential for a

mediated relationship between producers and consumers, distributors and transportation experts,

financiers and efficiency experts as well as management and labor. The outcome of this social

---

[23] On the "red menace" and its impact on industrial planning see David Noble, America by Design: Science Technology and the Rise of Corporate Capitalism (New York, 1977), p. 62.

form, its advocates claimed, would be an "industrial democracy" that promised Americans equal

participation in decision-making processes through the agency of associations representing

business, labor unions, professions, and other special interest groups.[24]

To the public, the Wilsonian ideologues endorsing "voluntary cooperation" had suggested

that labor and capital were indeed able to define mutual interests and to reach accords on wages,

working hours and methods of collective representation. As Jordan Schwarz has suggested, "the

war managers considered voluntary cooperation a rebuttal to...communism."[25] Within the context

of their efforts to organize American industry on Wilson's behalf, Bernard Baruch, Herbert

Hoover, their colleagues on the War Cabinet and their staffs of experts provided role models for a

new type of social legislator who was capable of maintaining a balanced discourse among the

interest groups that came to Washington to voice their grievances and expectations. Technically

knowledgeable and in command of enormous statistical information, the "war managers" arbitrated

disputes between industrialists and labor, maintaining a relationship between the aspirations of

profit-taking and the goal of higher productivity.[26]

In the wake of the war, Wilson contributed to the growing popular consensus for federal

mediation of the interests of business, labor and the general public when he convened an industrial

conference to discuss the prospects for foreign trade and labor relations within American industry.

At his direction, labor, and industrial leaders came together in October of 1919 with a group

nominally representing the interests of the "American Public" headed by Baruch. The conference

failed to produce any consensus and, as Jordan Schwarz has suggested, on-going strikes at U.S.

---

[24] On "voluntarism" see Schwarz, chapter two; on the "Associative State" see Ellis Hawley, "Herbert Hoover, the Commerce Secretariat and the Vision of an Associative State, 1921-1928." Journal of American History 61 (June 1964): pp. 116-40; Ellis Hawley, ed., Herbert Hoover as Secretary of Commerce. Iowa City (1981); Jerry Israel, ed., Building the Organizational Society: Essays on Associational Activities in Modern America (New York, 1972). See also Louis Galambos, Competition and Cooperation: the Emergence of a National Trade Association (Baltimore, 1966). On "industrial democracy" see Milton Derber, The American Idea of Industrial Democracy (Urbana, IL, 1970); Joe McCartin, "The Failure of Industrial Democracy: the U.S.Labor Movement and the Struggle over "Reconstruction" Following World War I." Paper presented to the American Historical Association Meeting, New York City, Dec. 30, 1990.
[25] Schwarz, p. 88.
[26] Ibid.

Steel revealed the limitations of "voluntarism" and the role of government in the formation of an "associative state."[27]

Though the model of federal control of industry offered by Wilson's war-time administration was discredited by the failure of the industrial conferences of 1919 and finally met its demise with the transition of the presidency to the Republican Party and Warren Harding in 1920, the public stature of the technically proficient manager remained high. Exemplified by Herbert Hoover who whetted the public appetite for "rational" leadership, the "engineer" became synonymous with both efficient and equitable management. As Edwin Layton has shown, Hoover advocated a new kind of "social responsibility" for American leaders which, on the one hand, relied on an analytical method of decision-making based on statistical information and, on the other hand, committed them to "a definite national program for such problems as rail and water transportation, irrigation and conservation, fuel and electric power development" as well as the construction industry.[28] Samuel Hays has also observed in the message of social responsibility relayed by Hoover to the American public evidence of a "new culture, infused with the values of science and technology, which was relatively homogeneous throughout the social order and triumphant by the time of the Depression in 1929." Hays has noted a manifestation of this "culture" in the technically oriented professions whose attention shifted in the aftermath of the war from "a primary emphasis on maintaining the standards of admissions to and conduct of their profession to the development of a vigorous effort to influence the particular environment which they as specialists knew." While some professionals continued to strive for the "protection" of their work, the new direction of professional behavior was "toward joint action to shape the future."[29]

The professional discourse among architects similarly revealed both a growing willingness to associate their "service" with technical expertise in their field and an emerging and apocalyptic vision of an efficient productive order yielding social benefits that would result from their work. This sentiment for change in professional practice in the wake of the world war is recorded on the

---

[27] Ibid., p. 210; Stuart Brandes, American Welfare Capitalism, 1880-1940 (Chicago, 1976), p. 128.

[28] Edwin Layton, The Revolt of the Engineers (Baltimore, 1986), p. 190.

[29] Samuel Hays, "The New Organizational Society." in Israel, pp. 1-8.

cover of the first issue of the AIA Journal for 1919 which declared, "To those who say the war will bring no changes - I say God forbid" (fig. 2.2). Evidence of a canon of modernism also presented itself in the context of discussions about the future role of the architect after 1919 in which practitioners expressed a forward-minded belief in industrial technology as a beneficial social force and a commitment to maximize its potential good through technical expertise and impartial administration. So, for example, AIA President Thomas Kimball presided over two national AIA conventions in 1918 and 1919 whose topics were the "Architect's Service" in which he reiterated his claims for the technical proficiency of the practitioner and dedicated the efforts of his fellow professionals to the task of restoring the productivity of the building industry.[30] Moreover, Kimball and other architects maintained that the presence and behavior of the professional would defuse the social tensions arising from the confrontation of "capitalists" and labor. As we have seen in the previous chapter, both Charles Whitaker and the President of the Illinois Chapter of the AIA, Henry Holsman, observed in articles published in the AIA Journal that their peers had begun to think seriously about their role as labor mediators in the wake of failure at Wilson's Industrial Conference in 1919.[31]

But, the exhortations of Kimball, Whitaker, and Holsman to assume "social responsibility" merged with another, less extrinsic professional goal that committed the architect to the task of reconstruction and industrial expansion. This more pragmatic view of professional "service" was expressed at the AIA Convention of 1919 by a lawyer, John Bell Keeble, whom Kimball had invited to speak. As had the AIA President, Keeble noted that professionals "do not have a profit motive." But, he continued, they did provide the "creative genius" permitting "capitalists" to make money. Thus, Keeble's words suggested that it was on the basis of their ability to generate profit -- rather than through their commitment to a vision of a more equitable social order -- that professionals proved their worth.[32]

---

[30] See "52nd Annual Convention," AIAJ 7 (April 1919): pp. 193-194. Kimball was AIA President from 1917 to 1922.

[31] Charles Whitaker, "The First Inter Professional Conference." AIAJ 8 (January 1920): pp. 6-8.; Henry Holsman, "A Pertinent Question," AIAJ 7 (December 1919): p. 545.

[32] John Keeble, "The Professional Idea." AIAJ 7 (April 1919): pp. 199-201.

As we began to note in the last chapter, this utilitarian view of professional service was both solidified and widely disseminated as a component of the professional ideology after 1919 through the work of the AIA's Post-War Committee. Ironically, it had been Kimball himself who had convened the committee and charged it with the responsibility of determining what the architect and the professional institution could do to redefine the architect's work.[33] Robert Kohn, whose service on the staff of the Emergency Fleet Corporation during the war we have noted, chaired the group and set out to identify the "new tendencies" that had conspired to change the conditions of architectural practice in the previous five years. In its preliminary report, the group invoked the Hooverian rhetoric of "maximization," observing that "the War has brought the whole world face to face with a situation which demands that production be increased and that resources and facilities be developed to an extent far exceeding pre-war volume." The architect, they remarked, had done nothing to coordinate his work with the movement for larger industrial organizations and efficiency in production. That failure, a preliminary report concluded, would haunt professionals in their effort to restore their practices. Thus, the committee revealed its fundamental purpose to formulate terms of "service" that accurately reflected the needs of the architect's clientele in order to improve the architect's ability to get work.[34]

Modernism, Professionalism and the Definition of Service: Thomas Kimball and the Post-War Committee

Though their proposals for a reform of practice were similar, a difference of intention separated the modernist impulse that inspired Kimball's endorsements of the architect's skill during 1918 and 1919 from the professional concerns of architects-at-large seeking to retain a market for their services that was reflected in the work of the Post-War Committee. Amidst a pervasive conviction that technical and managerial proficiencies were the primary components of professional "service" there were those who proclaimed that the architect's work was a medium of

---

[33] The earliest reference to the Post-War Committee appears in the Executive Committee Minutes, 17 November 1918, p. 6, AIA RG 510-2.

[34] "Post-War Committee - Preliminary Outline of Programme" AIAJ 7 (January 1919): p. 26.

social emancipation and those who regarded its purpose to be the maximization of invested capital. In the ensuing debates about the nature of their professional service, American architects demonstrated diverging ideologies split between the modernist allegiance to the social promise of an efficient productive system and the more tangible professional concern for the relevance of the architect's work to the mechanical operations of the building industry.

Both Kimball's comments to AIA members and the Post-War Committee's reports demonstrated a commitment to the task, generically stated by Herbert Hoover with increasing clarity and forcefulness throughout the 1920s, of rendering industrial output more efficient. As Edwin Layton has suggested, the Hooverian ideology shifted the focus of reform in the building industry as in other industrial sectors to "use," stressing the central importance of "maximizing production."[35] But whereas the agenda of professionalism called for the procurement of a protected area of specialized and essential work, the modernist ideologies of professionals such as Kimball invoked a rhetoric of social emancipation. Professionals, these forward-looking industrial reformers maintained, worked to fulfill their social responsibilities, liberating society from the inefficiencies caused by excessive profit-taking and restoring the will to experiment with new and more productive technologies. The modernist's goal was not merely to improve the architect's technical proficiency but also to make it possible to integrate himself into the managerial and decision-making network in business and politics that administered American industry.

The claims made by architects for the social relevance of their work recalled the idealism that pervaded Wilson's political strategies. For example, Thomas Kimball espoused both the convictions of the ideologues of "voluntarism" and the progressive doctrine of Herbert Croly when he suggested in his presidential address to the AIA Convention in 1919 that professionals could defend society from the evils of excessive profit-taking by reminding capitalists of their social responsibility. Like Croly, Kimball proposed that a new "class" of professionals committed to high ethical standards would provide the example and the inspiration for selfless work. True professionals, he stated, were "absolutely non-commercial." They provided "skilled service

---

[35] Layton, p. 190.

unselfishly rendered." Moreover, the professional offered the best medium for resolving the conflicts between capitalist and worker which had arisen in the wake of the war.[36]

True to the model of Croly's progressivism, Kimball expressed the need for solidarity among professionals organized against that "selfishness we call commerce." In order to disseminate his views and foster an expression of mutual purpose among experts in many fields, Kimball proposed that the AIA sponsor an "Inter-Professional Conference" in 1919 in the hopes that a new collective body would emerge capable of policing "professional policy."[37] Although a 'Congress of Professionals' never emerged from this meeting as Kimball had imagined, the conference set a precedent for the role of the AIA as a medium of communication between architects and practitioners in other professional disciplines who 'professed' their commitment to the task of managing America's industrial economy.[38]

Kimball concentrated his most aggressive reform efforts on the AIA itself. Between 1919 and 1922, he attempted to initiate a change in the Institute's membership policies with the intention of increasing its representation of practicing professionals. This goal had parallels in contemporary political ideologies that sought empowerment and equitable representation as a first step to resolve social unrest. Just as Wilson supported industrial workers in their efforts to express themselves with a single organized voice, Kimball encouraged practicing architects to seek out representation in their professional organization. An expanded membership also served the purpose of drawing architects into a single group without distinctions between educational backgrounds, social status, or professional achievement, eliminating what Kimball termed the "Country Club" pattern of organization.[39]

---

[36] See "52nd Annual Convention," AIAJ 7 (April 1919): pp. 193-194.

[37] The Inter-Professional Conference did not result in a permanent organization as Kimball had hoped. But it did provide Kimball and Henry Holsman, the AIA representative at the conference, with the opportunity to express their perceptions of the professional and his relation to the American political and economic system.

[38] Thomas Kimball, "The Post-War Committee: the Professional Principle," AIAJ 7 (May 1919): p. 215-216.

[39] Kimball proposed: that the AIA membership be enlarged by a lowering of membership requirements and dues; that the office of the AIA President be granted greater executive power as a foundation for more dynamic leadership; that the fee structure of the professional be changed from a percentage basis to cost-plus-fee. "53rd Annual Convention - President's Address," AIAJ 7 (June 1920): pp. 220-22.

Kimball was unsuccessful in bringing about a significant increase in membership during his term as AIA President. As we will see later in this chapter, the liberalization of membership policies after World War I was not easily achieved and met with stiff opposition from members who favored maintaining the privilege of Institute membership and antediluvian practices such as blackballing. But, the change in AIA policy toward its representation of practitioners marked a significant alteration of its institutional philosophy. The AIA had traditionally been autocratic and exclusive, ruled and populated by professionals with extensive academic credentials, large practices and important clients. Now, liberalization made it possible for AIA leaders to envision the Institute as a medium of professional reform with access to a broad constituency.[40]

One can also observe that Kimball's desire to forge a representative professional association coincided with the political model of an "associative state" advocated by Herbert Hoover throughout the 1920s and reflected in the tendency toward larger organizational structures in business and politics. As the representative of a majority of architects rather than merely an elite group, the AIA could legitimately enter into the dialogue between the manufacturers, suppliers, contractors, labor leaders as well as government officials responsible for the administration of the construction industry, a dialogue that would become more formalized in the twenties with the Commerce Department's encouragement of trade associations and industry-wide conferences on material and methodological standardization.

In addition to these changes to the AIA, Kimball proposed an amendment to the standard fee structure of professional practice, shifting it from a percentage of total construction cost to a fixed-fee with reimbursements for the architect's time and expenses. By eliminating the relationship between fee and building cost, Kimball postulated that this method, known as "Cost-plus-Fee", would alleviate any sense on the client's part that the architect was purposefully escalating the expense of construction in order to increase his compensation. Kimball also argued that with a fixed pay rate based on time expended, the architect would be more inclined to make

---

[40] Ibid.

the extra effort to reduce the costs of the building by investigating alternative designs and construction methods.[41]

As with his efforts to expand membership, Kimball's rationale for professional compensation based on work performed bore a resemblance to the emerging "ideology of the engineer." Just as Hoover emphasized the fundamental role played by the engineer in maximizing industrial output and eliminating waste, so too did Kimball stress the importance of reducing costs through close scrutiny of alternative methods of production in his defense of the Cost-plus-Fee arrangement. In endorsing this type of contract Kimball emphasized that the architect compensated for his time rather than on the basis of the dollar value of construction would be more likely to work toward greater efficiency in building production and to carry out his role as a manager of the production process.[42]

Throughout its one-year tenure, the Post-War Committee addressed itself to issues similar to those expressed by Kimball. Committee members accepted the notion that the architect worked in and for an industry and sought a way to "increase the efficiency and adequacy of architectural practice." They acknowledged the capacity of architects to mediate between trade unions and contractors as well as the potential role of the Institute in forging relationships with other technical and professional organizations modeled on the trade association. But unlike Kimball, the committee's reports stressed that the AIA's fundamental purpose was to re-establish the economic value of the private practitioner's work. This required that its members engage in two types of investigation by, first, making a determination of what the architect could do that had clear value to some productive mode; and second, making a determination of what work the architect should avoid in order not to duplicate the expertise of non-architects. The task was then to establish, in

---

[41] Ibid.

[42] Ibid., p.220. The reduction of profit-taking was a major political theme throughout the period of the New Era. Hoover felt that cost savings generated by greater efficiencies in production techniques should be turned over to the worker as a means of increasing their ability to participate in consumption and contribute to the expansion of the economy. Julius Barnes, President of the U.S. Chamber of Commerce agreed, noting in 1923 that over-concentration of wealth must be prevented because it threatened the development of "a broad purchasing market necessary to absorb our production." Quoted in Stuart Ewen. Captains of Consciousness (New York, 1976), p. 28.

the words of the Committee, "right relations" between the public, "whom we serve", clients "with whom we cooperate in production", and fellow architects and other professionals.

The first announcement of the Committee's agenda was mailed to architects in January of 1919 and declared that the American public was only "willing to pay" for work which increased "efficiency." The architect's new role, one determined by the desires of his clientele, was to lower costs, raise quantities of production, increase speed of production, and enlarge the applicability of mass-production techniques thereby expanding, in the words of the Committee report, "the range of mechanical possibility." The mailing proposed that architects communicate their experiences and recommendations to the committee in four key areas: the Attitude of the Public to Architecture; the Relation of the Architect to Other Professions, Crafts, Industries, and Trade Organizations; the Relation of the AIA to the Practicing Professional; and, the Relation of Architectural Education to Practice.[43]

Having been initiated by Kimball and other reform-minded AIA administrators, the Post-War Committee manifested some of the changes they advocated for the AIA. It solicited information from all architects -- AIA members and non-members. Thus, it carried out the efforts of Kimball to improve the Institute as a medium of professional representation. Merely by compiling and distributing its findings, the committee created a sense of solidarity and shared goals among architects all over the country. Absorbed in the popularity of strategies for rendering the industrial economy efficient such as "Scientific Management," committee strategists borrowed the analytical methods which they applied in their efforts to gather and analyze statistical information from the techniques praised by Herbert Hoover, Bernard Baruch, and other industrial utopians.[44] In order to reach out to its constituency, the Committee operated at a national level under the auspices of the AIA in Washington D.C. and at a regional level through the affiliated local "Chapters" of the AIA (fig. 2.3). To retain an aura of diversity and to avoid the taint of elitism among the committee's personnel, members were selected from various parts of the United States,

---

[43] "Post-War Committee - Preliminary Outline of Programme," AIAJ 7 (January 1919): pp. 25-28.

[44] On the proliferation of analytical methods from sociology and the statistical methods recommended by advocates of "Scientific Management" in the post-war era. See Karl, p. 73.

represented a range of stylistic affinities and were responsible for communications between their regional associations and the national body.

The Post-War Committee generated passionate interest in the efforts to reform practice and stimulated feedback from architects trying to work through the post-war construction slump. At the convention of 1919 held in April just months after the committee first announced its agenda, many practitioners turned out to discuss its work. "No sessions within the memory of the writer," the reporter for the Journal commented, "were so well attended as those of this convention. Most of them were given over to a discussion of the work of the Post-War Committee."[45] The membership further demonstrated its commitment to the committee by allocating ten thousand dollars for its work.[46]

The committee convened several times throughout the year in New York and Washington to discuss the material it had received from architects and to make its recommendations. In September it issued its preliminary conclusions to the AIA. In a surprising renunciation of the social idealism expressed by Kimball, the committee noted that the status of the architect had been damaged because the "professional ideal" conflicted with business practices and actually caused the architect to shirk his responsibilities to keep costs low and production levels high. Modern "business tendencies" compelled the architect to provide a more comprehensive service and to coordinate his work with the movement for efficiency in production. In 1919, they continued, the "professional ideal" could no longer appeal to a public eager for tangible evidence that its professionals were actually providing them with a resolution of the social conflict brought on by poorly performing industry.[47] Thus, the Committee concluded that as the principal professional organization representative of architects, the AIA should stop focusing on the ethics of specific types of practice and should instead encourage professional service for which "the public is willing to pay." The committee lamented,

---

[45] "52nd Annual Convention," AIAJ 7 (April 1919): p. 192.

[46] Ibid., p. 197. Two thirds of the voting members elected to make up to $10,000 from the AIA's Reserve Fund available to the committee. Somewhat depleted after the war, the Reserve Fund held approximately $31,000 in 1919. Receipts form dues in 1918 had been $22,867. Thus, the amount made available to the Committee amounted to one third of the reserves of the AIA indicating the magnitude of the members' commitment.

[47] "Post-War Committee - Preliminary Conclusions," AIAJ 7 (September 1919): pp. 390-95.

Our professional organizations are said to have occupied their energies in the past in prescribing the exact terms upon which an architect may seek or accept employment and have not taken into account sufficiently the kind and quality of service the public demands and is willing to pay for or the terms upon which the public is willing to engage service under the ever changing economic conditions that govern all business operations.[48]

The committee scrutinized some of the most significant achievements of the profession such as the Institute's Code of Ethics which defined correct and incorrect relations between the architect and his client and went on to acknowledge that industrial efficiency might require that the architect lower his standards of building quality. "Industry...must make things to sell at a profit; art and craftsmanship...must make things honestly and beautiful. They must derive remuneration for their labor but they cannot compete with the object made only to sell."[49]

Observing these conditions, the committee concluded that "industrial efficiency" relied on the proper allocation of capital for maintaining and expanding production processes. Since the 1890's architects had struggled with the issue of accountability for building costs: design professionals did not build buildings, the dominant pre-war conventions of practice maintained. Rather, they produced drawings from which estimates for work could be made. Thus, architects could not guarantee the cost of building in advance of the bidding process. The public, the committee noted, did not understand this and was troubled by the apparent lack of concern on the part of the architect for capital idled by inadequate advance economic planning. Although the AIA contract documents and the AIA Code of Ethics both excluded estimating building costs from the architect's service, the committee now argued that the architect must accept his responsibility to inform the client accurately of all costs related to construction as his designs developed.[50]

In their preliminary reports, committee members also suggested that the inability of the architect to create a market for his work was a consequence of the lack of public comprehension of the nature of his services. This they attributed to the low profile that the architect had assumed while working for an economic and political elite. Therefore, they proposed that the AIA

[48] Ibid.

[49] "Post-War Committee - Preliminary Outline of Programme," AIAJ 7 (January 1919): p. 7.

[50] Ibid.

undertake an advertising campaign on the architect's behalf in order to improve his image. In the course of this publicity program, the Committee continued, the Institute should attempt to eliminate the impression that the private practitioner worked for clients from one social class. Advertising might also help to expand the percentage of new building executed with the services of an architect, a goal which the committee suggested could only be achieved by lowering fees or by convincing those who built that the architect's work was worth its cost.[51]

Advertising served to combat another dilemma related to the public image of the architect. At a moment when design professionals were most anxious about their status, other "experts" within the building field such as the contractor competed for public attention. As we will see in a later chapter, the great impresarios of the construction industry such as Paul Horowitz and the Starrett brothers would achieve their greatest notoriety in the latter half of the twenties during the boom in speculative highrise construction. But even at the beginning of the decade, contractors had already emerged as quasi-professionals being paid, as the Committee noted, "for the use of [their] organization and its knowledge of the building business." As a consequence, the architect was perceived as being even less necessary as an intermediary between the builder and the client. Indeed, many architects had complained to the committee that contractors were supplying their own design services to the client.[52]

In order to stem the contractor's incursion into the terrain of the architect, the committee endorsed technical or "scholastic training" as a means of preparing young architects to be proficient in construction as well as design. The committee concluded its comments on education by proposing that design theory must itself be brought into closer correspondence with the goals of the profession, shoring up its social status. Architects, the report said, must be open to, "new forms of architectural design appropriate to the new forces and materials of construction and suitable to the new ways of living, the new ways of industrial production and the new social forces everywhere in evidence."[53]

[51] "Post-War Committee - Preliminary Conclusions," AIAJ v.7 (Sept. 1919): pp. 390-95.
[52] Ibid.
[53] Ibid.

The Post-War Committee set the tone for the reform of practice, providing the architect with the role model of the technical expert and industrial manager seeking greater efficiencies in industrial production. On the one hand, the committee's efforts reflected and prioritized the professional concerns of private practitioners who expressed a desire to regenerate the value of their work. On the other hand, the committee's presence and its recommendations in 1919 and 1920 set the stage for a growth in importance of the AIA as it became increasingly entrenched in the lives and practices of its members and expanded its relationship to the federal government, materials manufacturers and the construction industry. While many of its recommendations repeated those of Kimball, the committee's proposals lacked the social idealism as well as the utopian rhetoric that characterized his work. The distinction between the modernist belief in a technological utopia and the professional pragmatism characterized by the utterances of the Post-War Committee would persist throughout the decade as architects weaved legitimate expressions of social conscience together with a self-serving commentary on the strategies of formulating the terms of their "service."

New Strategies for Professional Work after World War I

As expressed by the Post-War Committee, the architect's ability to perform a "service" now implied the capacity to increase efficiency and enlarge production. These tasks required technical expertise and placed a high priority on architectural design that applied the techniques and materials of industrial production to the construction process, that optimized the usable space within a building and that was carried out with financial and managerial acumen. Many professionals expressed an eagerness to demonstrate their ability to create efficient plan forms which provided maximum usefulness in a minimum of space.[54]

---

[54] See George Nimmons, "Industrial Buildings," AA 129 (5 January 1926): pp. 15-27. Nimmons argues that the architect can profitably help the industrialist by planning buildings which are both sensible and handsome. He makes a case for reducing the costs of buildings by simplifying construction in order to keep overhead costs of American industry down and American commodities cheap and competitive with foreign produced commodities. See also "Editorial," AA 132 (October 1927): pp. 521-22. On standardization see Abram Garfield, "Submitting Sketches," AIAJ 16 (January 1928): p. 9.

These new tasks linked the architect's services to the work of other "experts" who contributed to the processes of building production. Budgeting and estimating, for example, were services that made it easier for an owner to borrow money for construction. By providing lending institutions with a means by which they could confidently gauge the total costs of a proposed project, the architect facilitated their assessments of credit-worthiness and, in the course of the decade, would make his services an indispensable part of the institutional process by which speculative capital was transferred into the building industry.[55] In many cases, the architect was willing to demonstrate not only costs but also profits implied by specific building types, their sizes and locations.[56]

The diversity of tasks that architects now attempted to incorporate into their "services" made it difficult for any single practitioner to carry out the conventional role of the architect as a "master" of all trades. Thus, the profession's claim of possessing valuable expertise over such a broad range of disciplines forced individual architects to address the issue of specialization. Trained as an architect in the office of D.H. Burnham and now a contractor, William Starrett reported to the Post-War Committee that the "division of labor" within the work of design professionals was a necessary consequence of the transformation of the building industry in the previous decade. He proposed, therefore, that architects consciously divide themselves into three groups: those responsible for design, those responsible for construction, and those responsible for business and finance. It was unreasonable to expect, he maintained, that the great designer could also be a great businessman. By deferring specialization, Starrett asserted, architects were merely making it easier for large construction companies to take over all three areas by providing specialists in each field. "It is business and not ethics that we are serving," Starrett wrote in an open letter to the committee, "and efficiency is the keynote."[57]

[55] This aspect of the Architect's service became increasingly valuable throughout the 1920's. In Charles Lench, The Promotion of Commercial Building (New York, 1928), the author states that lending institutions had placed a great emphasis on the role of the architect in the estimating and financing process. We will examine the relationship of architectural practice to speculative office building construction in the following chapter.

[56] In 1922, for example, George Nimmons conducted a study for the Chicago Realty community demonstrating the relative profitability of high rise construction at a variety of heights. See Nimmons, "The Passing of the Skyscraper," AIAJ 10 (November 1922): pp. 356-61.

[57] William Starrett quoted in "Post-War Committee - Some Opinions." AIAJ 7 (October 1919): p. 458.

Many architects shared Starrett's view that architectural "service" embraced the separate

but interdependent tasks of design, building and financial management, each of which related to

productivity in the construction industry.[58] In order to aid the architect in performing this work,

professionals and their collaborators produced an equally specialized literature. In 1916 the AIA

Journal began a section called "Technical Notes" prepared by D.K. Boyd which reviewed new

construction technologies including those that produced improvements in production time. New

methods of scheduling and performing "quantity surveys" (take-offs of material quantities) were

the frequent topics in architectural periodicals and within the AIA.[59] Office manuals included

sections on estimating such as Frederick Adams' Manual of Office Practice. (New York 1924). In

1928, Architectural Forum formally separated its issues into a section which dealt with design and

a section which dealt only with technical and financial information valuable to the architect in

forecasting construction costs.

One of the most important consequences of the re-definition of the architect's "service"

was the criticism it unleashed on conventional teaching pedagogies. There were those architects

like Charles Moore who, as we saw in the last chapter, believed that the true mission of

architecture schools was to convey to the student a sense of aesthetic propriety derived from

historical precedent.[60] Most architects and teachers still supported -- in principle -- the academic

program of the Ecole des Beaux-Arts, the dominant teaching method in the United States

throughout the 1920s. But, in contrast to Moore, many professionals were beginning to express

the idea that students should receive more training in the technical sciences such as statics.

Indeed, despite its hegemony, some practitioners including those who were Ecole-graduates

---

[58] See for example Charles Whitaker, "Defending the Profession." AIAJ 10 (June 1922): p. 206.

[59] Throughout the 1920s, architects attempted to develop better estimating methods. As early as 1911, the AIA Journal began a campaign to develop Quantity Surveying. See "News Notes," AIAJ 9 (July 1921): p. 251. In 1925, the AIA appointed a committee to examine "Cubing", the method by which the gross cubic volume of a building was established in order to determine construction costs. See "Cubing of Buildings," AR 58 (October 1925): p. 393. The AIA Subcommittee on Cubing headed by D.K. Boyd sought standard methods for calculating cubage. But, the committee was discontinued in 1926. Their first draft, "Cubic Contents of Buildings - Standard Method of Calculation and Form Statement," was published in 1926 as AIA Document #215. See Executive Committee Minutes, October 1926, p. 5, AIA RG 510-3.

[60] See also Albert Ferran, "The Teaching of Architecture in the United States." AIAJ 12 (August 1924): pp. 359-63.

criticized the teaching program of the Ecole for having led architects away from the technical

aspects of construction. T.E. Billquist, an architect from Pittsburgh, addressed the Post-War

Committee in 1919. "Much needed advance," Billquist wrote, "has been made in the design of work

entrusted to architects, largely due to men trained under French influence." Yet, despite this fact,

Billquist observed that,

> Many of these men have...a low opinion of the structural side of their profession,
> preferring to leave this entirely to engineers and contractors. By this self-chosen
> limitation of the function of their profession, the relative importance of general
> contractors and building engineers has increased...leaving to the architect only the
> design.[61]

Billquist's comments were accompanied by those of others who felt similarly that

architectural education should be more closely integrated with a teaching program in engineering.

C. Grant LaFarge addressed the Post-War Committee in its deliberations on architectural

education in July of 1919 and supported programs that linked engineering with architectural

design.[62] H.J. Carlson, a member of the visiting committees at Harvard and M.I.T. noted that the

integration of practical lessons and design training had been initiated at both schools. Carlson

described what he believed to be an important teaching experiment: students interviewed clients

who had built buildings similar to those that they were designing as school projects in order to

better understand the process of design as an accommodation to convenience and usefulness.[63]

The San Francisco Society of Architects argued that, "Architectural students should be trained,

first in all of the fundamentally scientific elements of architecture, thereby to become proficient at

least in that which constitutes the science of the profession."[64] The Illinois Chapter called upon the

AIA to encourage an extension of the architecture curriculum necessary to fulfill licensing

requirements from four to five years and requested that the programs include experience, "in

---

[61] "Post-War Committee," AIAJ 7 (April 1919): p. 156. See also William Steele, "The Architect and the Engineer," AIAJ 10 (March 1922): pp. 62-66. Billquist's comment may resemble the diatribes against the Ecole by architects such as Sullivan before the war. But it is important to recognize an important distinction. Whereas Sullivan criticized the Ecole-trained architects for their use of historical "styles," Billquist made a distinction between the aesthetic and technical aspects of building. Sullivan would never have divorced "design" from building technology. But, Billquist not only recognized a difference between engineering and design but seemed to reinforce the distinction by suggesting that a separate curriculum could be developed to address engineering by itself.

[62] "Post-War Committee," AIAJ 7 (July 1919): pp. 325-27.

[63] Ibid.

[64] "Post-War Committee - Some Opinions." AIAJ 7 (October 1919): p. 454.

architectural practice and of building practices."[65] In each case, practicing professionals pledged themselves more strongly to the idea that there were significant technical activities in which the architect engaged and that these activities could be categorized and taught as segments of a larger curriculum.

As with the popular post-war conventions of thinking about American industry, the Post-War Committee expressed the belief that the medium of industrial growth was not merely broad technical expertise but expertise applied systematically toward the goal of improving production relations and creating what it called "right relations" within the industry. Architects also expressed a willingness to assume a broad range of managerial responsibilities in the course of their normal work. In 1920, the AIA issued its revised Handbook of Architectural Practice (Washington D.C.) which made it clear that good management was now central to the professional's service.

> The Architect owes his client a competent management of business affairs
> whether large or small....Good management is vital, for, granting the work to
> have been skillfully designed and wisely specified, its swift and proper execution
> depends in no small part on the Architect's ability as an administrator.[66]

The Handbook depicted the architect's primary responsibility as residing in his relationship with his client. "Expert management," it was stated in the Handbook, "conduces... getting the utmost for the owner's money." But, the Post-War Committee's proclamation of the architect's responsibility to contribute effective management of building production notwithstanding, it was the contractor who held the legal responsibility for the scheduling and execution of work on the jobsite. The authors of the Handbook therefore had something other than construction management in mind when they drafted this canon. Rather than administering the work of the contractor, "expert management" signified a variety of responsibilities that ranged from organizing the design process to ensure that no legal or practical restrictions were overlooked; to organizing the layouts of buildings in the most economical fashion; to organizing the

[65] "Post-War Committee on Architectural Practice." AIAJ 7 (April 1919): p. 158. The question of a five year program was repeatedly discussed throughout 1919 and 1920. In 1921, the ACSA voted to support a five year curriculum in undergraduate programs of architecture. The NCARB simultaneously began pushing for minimum registration requirements encouraging 5 year degrees. The five year degree was an undergraduate degree which normally included courses in liberal arts in its first years and specialized in architectural studies from the second to fifth year. See "News Notes," AIAJ 9 (July 1921): p. 252.
[66] AIA, Handbook, Preface.

work of their offices in order to quicken the pace of the production of drawings. During

construction, the Handbook also suggested, the architect assumed the responsibility for

determining that the building was built as designed; that the workmanship was satisfactory; and

that the client's payments to the contractor were issued in proper relation to the progress of the

work. In performing this last task, the architect made assessments of costs, compared these with

standard pricing and determined that all aspects of the work had been completed.[67]

In their efforts to manage the work performed in their own offices, architects could turn to

an increasing body of published material which outlined both working methods of other architects

as well as those of other professions and businesses. This literature was not unique to the 1920s.

In 1902, the future AIA President and New York architect, D. Everett Waid, published a series of

articles for the Brickbuilder entitled, "The Business Side of an Architect's Office," in which he

discussed office procedure, giving examples that ranged from office forms to methods of storing

drawings which would avoid duplications of work or time lost as a consequence of misplaced

documents.[68] In 1912, William Ludlow published an article entitled "Scientific Management in the

Architect's Office" in which he developed both methods to produce incentives for more efficient

work among employees and strategies for saving time in the production of working drawings and

the supervision of buildings.[69]

The articles on office practice published before the war emphasized the profitability of

architectural offices. Beginning in around 1918, authors addressing questions of office practice

began to stress the importance of good management of the architect's work to a cost-effective

building campaign. In that year, George Baldwin's article on Albert Kahn appeared in

Architectural Forum and demonstrated the working methods that Kahn employed to complete

factories and office buildings quickly, presenting illustrations of eighteen different office forms with

[67] Ibid.

[68] D. Everett Waid, "The Business Side of an Architect's Office, Part I" Brickbuilder 11:1 (April 1902): pp. 69-70; Part II (August 1902): pp. 91-93; Part III (September 1902): pp. 157-60.

[69] Ludlow advised that architects managing offices offer profit sharing as a means of involving the draftsmen in their own efforts to achieve higher productivity. He suggested that employers carefully review each work activity with the goal of devising means of cutting time and reducing the involvement of higher priced, better trained workers. William Ludlow, "Scientific Management in the Architect's Office," Brickbuilder 21 (May 1912): pp. 138-9.

which the architect coordinated work inside and outside of his office. The firm's "Graphic Progress Report," for example, depicted the status of work in the architect's office and in the field, comparing these to the preliminary work schedules prepared by the design team (fig. 2.4).[70]

In the 1920s the professional's efforts to streamline office practices drew on the disciplines of scientific management and business administration. In 1924, Frederick Adams, a supervising architect from the McKim Mead & White office, published his own Manual of Office Practice in which he emphasized the priorities of time in the production of working drawings. "Time is the most important single factor in all building operations," he wrote. Because the pace of work by the contractor determined the time frame for the construction process, Adams insisted that the architectural office be prepared to compress its "design process" in order to accommodate the contractor's schedule. To this end, it was imperative, Adams observed, that the architectural office manager fully understand each component of work performed under his authority, that he regularly assess office productivity and that he be willing to reconfigure the relationships of his staff and their individual tasks in order to speed the overall process of producing construction documents. Employees were equally responsible for the productivity of their work. "Careful reading [of this book]," Adams wrote, "should make it clear to the architectural worker no matter how subordinate his position, that achievement [of efficiency] must be largely contingent upon the extent to which he is able to co-ordinate his efforts with those of others toward the expeditious and economical attainment of a common end." In the spirit of Frederick Taylor's reorganization of labor in industry, Adams' Manual provided the format for these "coordinated efforts" describing everything pertinent to office productivity from the arrangement of desks, to the design of forms, the layout of drawings, the correct technical terminology and standard symbols that might help "to secure the economy possible through prior preparation and volume production."[71]

Several books on office methods in the 1920s reiterated Adams' thesis that the productivity of architects could be improved by organizing workers and standardizing methods. Charles

---

[70] George Baldwin, "The Offices of Albert Kahn, Architect, Detroit, Michigan," AF 29 (November 1918): pp. 125-30.

[71] Frederick Adams, Manual of Office Practice (New York, 1924), p. 6; p. 4; p. 74.

Collins' Drafting Room Methods (NY 1918) described how to layout an office with special

consideration for the minimum spatial requirements for blueprint machines, file cabinets, ink

bottles, pens, pencil sharpeners as well as draftsmen. Collins borrowed the standardized forms and

symbols that he illustrated and the office methods he proposed from the engineering division of a

manufacturing company suggesting even more strongly the similarities between the principles of

industrial management and the organization of architectural work. In 1928, Eugene Clute

authored a more sumptuous book entitled Drafting Room Practice (published as part of the Pencil

Points Press series) which included many examples of working drawings and renderings from some

of the largest and most prestigious offices in the United States. Though Clute emphasized the

importance of the aesthetic quality of designs, renderings and even of a sheet of working drawings,

he also included chapters covering construction financing in which he declared the importance of

efficiency in an architectural office to the success of a building venture.[72]

Architects perceived their managerial responsibilities as not merely limited to the work

performed in their offices but extending to the whole industrial sector. Guided by the AIA, design

professionals attempted to create a more visible role for themselves as the "leaders" of

organizational reform in the construction industry. In Chicago, for example, the city and state

chapters of the AIA set up a task group to investigate supposed price fixing by both contractors

and union leaders.[73] In 1921 the group sent a letter to the Senate Committee on Reconstruction in

which they pointed out other impediments to growth such as high material costs and interest rates.

They proposed a prohibition against strikes and lockouts, the creation of a federal bureau of

building to investigate improprieties on the construction site and a loosening of capital to home

builders and speculators.[74]

---

[72] In the 1920s, the magazine, Pencil Points, produced a number of books under the heading of its "Pencil Points Library Series" which focused on the technical aspects of architectural practice. This was consistent with the commitment of the magazine's editorial staff to the activities in the "drafting room." The series included Arthur Guptell, Sketching and Rendering in Pencil (New York, 1922); Philip Knoblach, Good Practice in Construction (New York, 1923); Clinton Blake, The Architect's Law Manual (New York, 1924); John Harbeson, The Study of Architectural Design (New York); and Eugene Clute, The Treatment of Interiors (New York).

[73] "The Building Industry," AIAJ 9 (April 1921): pp. 141-143.

[74] Ibid.

Architects received endorsements for their efforts to lead the industry from other "experts" working in the field. In response to the persistent turbulence in the construction market in 1920, the newly organized Congress of Building Industries (CBI) convened for the first time. The CBI combined within its membership representatives of the trade unions and labor, contractors, materials producers as well as architects all of whom shared a concern for the productivity of the industry and its potential for generating income as well as profit. But, in its proposals to scrutinize and assess the operation of the construction industry, the group named the architect and his professional organization, the AIA, as the most appropriate of its members to lead an investigation impartially. The architect's "skill and training, his broad viewpoint of the industry as a whole, his impartial position as a professional serving all interests faithfully," the CBI membership noted in its public statement, "qualify him to be of indispensable service in carrying out the study which is so desperately needed at this time."[75]

Both the presence of the CBI and the willingness of the architectural profession to participate in these collective efforts to reconfigure the industry indicated the emergence of a new relationship between the architect and other "experts" he encountered in the construction process. In contrast to the intimate association between architects, artists, and their client/patrons based on a mutual desire to advance artistic culture that was depicted by Royal Cortissoz before World War I, the CBI made manifest the architect's participation in a community of "technocrats" who shared a desire to improve industrial efficiency through better management.[76] On the one hand, we have noted that a persistent weakness in the building economy between 1919 and 1924 incited this behavior. But on the other hand, the ideological foment for technical leadership following the war also contributed to the intense concern for industrial performance and the belief in the propriety of an interdisciplinary allegiance among a managerial elite.[77] At the same time that architects and

---

[75] "A Congress of the Building Industry," AIAJ 8 (September 1920): pp. 340-341.

[76] Ibid.

[77] It was not merely Hoover's assessment of "social responsibility" that incited these efforts. As with other members of the American 'technical' leadership, architects expressed concern for inefficiencies in the areas of industry with which they were affiliated especially during the weak post-war recovery. The proposed CBI study responded to a troublesome and debilitating cycle of depression and inflation that plagued the construction industry between 1919 and 1924. As Frederick Ackerman noted at the time, the low levels of demand for new construction during the war and in its immediate aftermath concealed a drop in overall production capacity brought about by war- and depression-induced

their collaborators initiated their efforts to assess the sources of inefficiency in their industry

between 1919 and 1921, Herbert Hoover undertook his renowned investigation on "Waste in

Industry" conducted under the auspices of the newly formed Federated American Engineering

Societies, an umbrella organization for the more specialized associations in civil, mechanical,

mining, and electrical engineering. As did architects viewing the construction industry, Hoover's

group concluded that the fault for waste and inefficiency lay with management's poor allocation of

financial and labor resources rather than to unproductive workers.[78]

In his "Waste in Industry" report as well as his subsequent efforts to improve industrial

efficiency as Secretary of Commerce, Hoover focused on the construction industry and, in

particular, its management of labor. While Hoover was sympathetic to labor and its unions,

building production posed special problems for his efficiency measures because of the exclusivity of

its trades unions which restricted the labor market and artificially drove up wages.[79] These

problems worsened after 1919 when, due to the decline of building volume, a labor-shakeout in the

industry drove construction workers into other sectors of the economy where the post-war recovery

was more substantial. In New York State, for example, labor statistics revealed a decrease of 30%

in the number of bricklayers and masons between 1910 and 1920.[80] This produced a labor

shortage and a stifling rise in wages which architects and contractors perceived as a threat to

---

migration of the trained labor force into other areas of work. After 1922, this shortage of skilled mechanics and the lower
production capacity of the construction industry as a whole became evident. In these years the nation's liquidity — a result
of industrial expansion during the war and the repayment of war debt by the allies — caused a speculative furor resulting
in a rapid rise in property values and a new demand for buildings which used land more efficiently. Increasing demand,
high liquidity and low production capacity, Ackerman maintained, induced a dramatic inflation of material prices and
labor which threatened to cause a collapse of the building market. This speculative cycle caused an increase in
construction volume of between 40% and 60% between 1922 and 1923 which resulted in the increase in prices of materials
and wages. Frederick Ackerman, "Craftsmen-Machines-Credit-Speed." AIAJ 11 (June 1923): pp. 249-52. See also "The
Present Situation in the Building Industry," AIAJ 11 (June 1923): pp. 247-49.

[78] Layton, pp.179-218.

[79] "In Chicago we find that the average age of building mechanics is over forty years. That few apprentices in
any trade are now engaged is due to the operation of the by-laws of the various unions," noted by an architect named
Davidson and cited in "The Secretary's Table," AIAJ 10 (February 1922): p. 49. On the problem of labor costs in the
building industry see Henry Holsman, "The Labor Situation and the Landis Building Trades Agreement," AIAJ 9
(September 1921): pp. 343-8. On Hoover's work as Secretary of Commerce see Herbert Hoover, The Cabinet and the
Presidency, 1920-1933, vol. II, The Memoirs of Herbert Hoover, (New York, 1951).

[80] Stuart Chase, "Building Trades and Other Trades a National Problem." AIAJ 10 (June 1922): pp. 202-203.
Chase noted that the number of chauffeurs increased by 438% between 1910 and 1920, due in no small part to the
increase in the number of cars. Jobs elsewhere such as in the automobile industry required much less training. See also
Frederick Ackerman, "The Division of Labor." AIAJ 10 (September 1922): pp.291-4.

recovery after 1921. General Marshall, a representative of the Association of General Contractors, discussed the situation in a paper delivered at the AIA Convention in 1922. "Labor rates...are rapidly increasing....we know that under present conditions these scales [of pay] will soon stop building operations."

As members of a profession claiming to perform the task of industrial management, architects acknowledged a responsibility to address the labor issue. In 1922, the Journal featured an exchange of opinions on the question of the architect's role as a mediator between construction workers, contractors, building owners and investors. "Advice is needed," the Journal noted in its explanation of the conference, to determine "the relation that should exist between the architect and the various problems of the industry that are more or less intimately connected with labor organization." With one exception, the contributors agreed with their co-panelist, Clarence Stein, that insofar as architects shared an economic interest in the building process and since buildings could not be built without labor they were forced to participate in labor/management negotiations. Offering an argument extrapolated from the professional ideology proclaiming disinterest, Stein also claimed that the architect, alone among the leadership of the industry, was capable of impartial judgment insofar as he was committed to the agenda of efficiency.

In contrast to Stein, Frederick Ackerman dissented from this opinion, arguing that due to his employment by the building-owner the architect could not help but be biased against the interests of trade unions and their members. "The architect," Ackerman wrote in a rebuttal to Stein, "is and will remain an employer, a director of the labor of others from the top to the bottom of the industry."

---

[81] "The Present Situation," p.247.

[82] Brandes, p. 128. In the 1920s, the appropriate relationship of labor costs to profits was frequently debated. Confronted by dwindling markets for their goods in the early twenties, American industrialists showed little sympathy for a working class burdened by widespread unemployment: To improve the profitability of their businesses they commonly resorted to lowering wages. To appease industrialists in their desire to reduce their overhead costs and to avoid over-production, ideologists of Warren Harding's "Return to Normalcy" advocated a reduction of the workday to eight hours. In 1921, Herbert Hoover, as chairman of a national conference on unemployment, advocated lowering prices rather than wages as a means of increasing consumption.

[83] "The Secretary's Table," p. 48. Participating in the discussion were Clarence Stein, Frederick Ackerman, Henry Holsman and others.

> Taken in the aggregate, judging by Convention Proceedings, articles and editorials in architectural journals, and what we say among ourselves, the profession views the modern laborer and his organization as something distinctly alien.[84]

Architects commonly regarded "unionism," Ackerman noted, as "big business applied to working."[85]

Frederick Ackerman was not without company in his criticism of the architect's handling of the "worker." For example, in several articles published in the AIA Journal the English Syndicalist, Arthur Penty, advocated radical reforms of the building industry calling for the elimination of profit and the cultivation of guilds.[86] Ackerman and Ralph Adams Cram both supported Penty's proposal to nationalize real estate development especially in the areas of residential building.[87]

But the advocates of industrial reform inspired by a humanitarian agenda were outnumbered by architects who viewed the behavior of labor and its representatives simply as impediments to efficient and profitable production. Even among the group he debated, Ackerman's charge that architects were opposed to collective representation of workers in the construction industry was borne out: members of the group blamed high labor costs on the restrictive membership policies of the trade-unions. Moreover, they advocated better working conditions but only as a means of alleviating the risk of strikes and they proposed an anti-union agenda which included wage freezes and an expanded apprenticeship program to increase the supply of construction workers.

These strategies for the correction of the labor problem were not new to the professional discourse. Both the question of the "supply of labor" and the proposal to increase the numbers of students receiving training in the building trades were debated by the Congress of Building

---

[84] Ibid. Ackerman was supportive of the labor position. In an earlier article entitled "Our Philosophy of Restriction," AIAJ 9 (March 1921): pp. 72-73, he stated that the building slump was a natural consequence of the "capitalist system" in which leaders of 'big business' conspired to restrict output in order to raise prices.

[85] Ibid.

[86] See by Arthur Penty, "Toward a National Building Guild," AIAJ 7 (April 1919): pp. 148-50; "The Crisis in Architecture," Part I, AIAJ 7 (February 1920) pp. 55-60; Part II, 8 (April 1920): pp. 145-50; Part III, 8 (June 1920): pp. 208-12; Part IV, 8 (July 1920): pp.252-55.

[87] See Ralph Adams Cram, "Machines and Men," AIAJ 10 (December 1920): pp. 399-401; and Frederick Ackerman, "The British Guildsmen and Their Plans," AIAJ 8 (October 1920): pp. 373-76.

Industries in 1921.[88] The Committee on Industrial Relations of the AIA also pushed for the

implementation of the "Apprenticeship Movement" through which contractors were encouraged to

take on young laborers and train them in a trade.[89] But, the labor issue touched more closely to

home for American architects when it seemed likely that a draftsmen's union representing the

architect's employees would succeed in establishing a national presence through an affiliation with

the American Federation of Labor in 1920.[90] "Draftsmen," an article in the Journal suggested,

complained of being overworked, inadequately compensated, excluded from profits, unprotected

from layoffs in slow periods, unable to see projects on which they worked and without proper

training to move ahead in the office.[91] Sensitive to the plight of the "worker," Ackerman

maintained that the desire of the draftsman for unionization was a consequence of the relegation

of their work to the level of the common laborer. Draftsmen, he observed, were trained to

perform highly specialized tasks which they repeated routinely year after year and for which they

were poorly compensated.[92]

In response to the Draftsman's Union, the AIA made an effort to draw draftsmen into the

professional organization, hoping to divert energy away from the movement to form a

"brotherhood" of the architect's employees.[93] In 1920, the Journal instituted "The Draftsman's

Page" which offered advice to the owners of practices and their employees on ways to avoid the

necessity of collective bargaining. George Cummings, editor of the monthly feature, confided to

his audience that one way of achieving this end would be to offer the draftsmen their own

---

[88] "The Congress of the Building Industry." AIAJ 9 (April 1921): p. 141.

[89] Report of Robert Kohn to the AIA Executive Committee, Minutes, December 1922, p. 5-7, AIA RG 510-3.

[90] As early as 1919, the question of a "Draftsmen's Union" and its implications for professionalism had been raised by the AIA Board of Directors. See Charles Whitaker, "Shadows and Straws," AIAJ 7 (December 1919): p. 510.

[91] "Architects and Draftsmen." AIAJ 9 (1921): pp. 19-20. The "AIA Circular of Advice" (AIA Doc. # 141) issued in 1920 suggested that professionals aid in the advancement of draftsmen in their offices but that they should "urge...draftsmen to avail themselves of educational opportunities." (paragraph 7). This merely reaffirmed the bias of the profession toward academic training, limiting the possibilities that the unschooled could become architects. Whereas graduates of recognized architectural schools did not need to submit work to the AIA as part of their application for membership, "draftsmen" were required to submit examples of their work.

[92] Ackerman, "The Division of Labor," pp. 291-294.

[93] The AIA Journal included a "Draftsman's Column" after 1920 and the Conventions of the AIA included special events such as the "Draftsman's Luncheon" which created a medium for draftsmen to express their frustrations with work that fell simultaneously under the scrutiny of the professional organization.

representation within the AIA thereby reducing the possibility of agitation against those AIA members who owned offices.[94]

The prospect of a Draftsmen's Union met its demise after 1922 as a consequence of the increased volume of work and compensation to architects and their employees. Nevertheless, the professional commitment to industrial expansion remained unabated throughout the period. Alongside a rising optimism among AIA members that accompanied the half decade of prosperity between 1924 and 1929, the architectural discourse recorded a decrease in the rhetoric espousing the social relevance of the professional's technical proficiency and disinterested behavior. This is not to say that architects relinquished the claim that their service proffered more efficient building production. Rather, the focus of their professional ideologizing shifted from the vaulted and peripheral agenda of social equity that had been a part of Wilsonian "voluntarism" and Hoover's "associative state" to the particular and immediately relevant issues of "maximization" and profitability in building production on which they based their efforts to legitimize their role in the construction industry.

Organizing the Architecture Profession: the American Institute of Architects 1890-1925

To the architecture professionals struggling to define their role after World War I, the AIA was simultaneously a symbol of professional solidarity, the defining element in the field of the professional discourse through which architects sought to resolve issues of "service," ethical behavior, fees and public acknowledgement and the medium by which new conventions of thinking could be disseminated to practitioners around the country. Thus, at the same time that the AIA helped to usher in change it preserved the continuity of the professional consciousness, melding architects into a cohesive national association of individuals bound by common aspirations for work. The reasons for the AIA's success in the 1920s as a vehicle for a collective conscience lies as much in its past history and its emergence as the primary institutional representative of the

---

[94] See articles by George Cummings under the heading of "Draftsman's Column," which appeared throughout 1920 in AIAJ.

127

profession as in its activities after the war. Therefore, in order to understand the AIA and its role

in the 1920s we must first consider briefly its genesis and early evolution.

As individuals possessing a unique form of knowledge, architects gradually came to

understand that the value of their work was dependent on their ability both to expand the

applicability of their knowledge to some productive process and to limit the access of others to that

knowledge.[95] As with other professional groups, architects attempted to coordinate their actions

in defense of the terrain of their expertise. The AIA provided the means by which American

architects could formally establish a relationship among themselves, define their work through

discourse, and establish the conventions of practice on which they based their claims for fees.[96]

From the moment of its inception in 1857, the AIA represented the architect in his

aspiration to forge a special social status as well as a unique territory of expertise. Founded under

the auspices of Richard Upjohn, a church architect and prominent member of the New York

Ecclesiological Society, the Institute advanced the notion that through his study of principles of

form and historical styles the architect produced a more correct and artistically advanced design

than that of which the simple carpenter or mason was capable. In this regard, the relationship to

Upjohn and indirectly to Ecclesiology was fortuitous: following the intellectual tradition

established by cultural critics such as John Ruskin, Ecclesiologists attempted to convey to

architecture the status of a fine art imbued with cultural meaning.[97] Ruskin himself had drawn a

sharp distinction between building -- the simple accommodation of the need for shelter -- and

[95] On professionals and the process of professionalization in related fields see G. Geison, "Introduction," in Geison, ed., Professions and Professional Ideologies in America (Chapel Hill, NC, 1983); H.L. Wilensky, "The Professionalization of Everyone." in The American Journal of Sociology 70 (September 1964); and Edwin Layton, "The Evolution of a Profession," in Layton, chapter two. For a treatment of the professionalization of architects in the United States see Saint, chapter on American architects; Dstoglu; Bannister; and Saylor.

[96] Saint, pp. 78-80. The AIA was first founded in 1836 in Philadelphia under the auspices of Benjamin Latrobe and Alexander Davis. But, this organization failed in 1837 and was not revived until Richard Upjohn started a group of a similar name in New York City in 1857.

[97] Ibid. The membership of the AIA struggled to make practical business advances for itself through its fledgling organization. Importantly, the architect gained much for his reputation through affiliation with "cultural" organizations such as the Ecclesiologists. Inspired by the writings of John Ruskin, the Ecclesiologists maintained that architectural design was culturally significant and made legible the quality of a social and political system. Thus, architectural design was a fine art and architects themselves were artists. Not surprisingly, architects emphasized the intellectual dimension of "architecture" in contrast to the utilitarian nature of building. The writings of Montgomery Schuyler are among the first by an American critic to clearly articulate the difference between buildings which were merely built and buildings which articulated the principles of construction.

architecture, or decorated building. Thus, ecclesiology legitimized the architect's claims to an elevated social status as an artist or embellisher of building whose work was of superior value to those who merely built.[98]

The validation of the professional's status as an intellectual and later as an artistic connoisseur was a leitmotif of his claim throughout the late 19th century and early 20th century.[99] Not surprisingly, members of the AIA attempted to live out and fulfill the roles which they projected for themselves. In the first years of the Institute, its meetings were dedicated to the exchange of ideas among members. Papers delivered addressed such issues as "Truth in Architecture." But, intermingled with the discussion of architecture as an "art" were arguments for a fellowship which "could promote their individual welfare," educating the public on the subject of what constituted "good" architecture with the intention of demonstrating to a lay audience why the architect's services were necessary.[100]

The activities of prominent professionals who embodied the ideals of connoisseurship and intellectualism reinforced the claims of the architect for a unique social status. Among the first and most significant of these architect/role models was Richard Morris Hunt, born to a prominent New England family, raised in Washington D.C., Boston, Rome and Geneva, and one of the first American architects trained in Paris at the Ecole des Beaux-Arts.[101] Having spent many years of his youth living in Europe, Hunt had experienced the monuments of antiquity and the great urban centers of Europe first hand before deciding upon a career in architecture. Thus, he came to his profession naturally, able to admire and appreciate the form of the buildings in whose midst he lived without technical knowledge or academic training (a fact which led Royal Cortissoz to rhapsodize about the "chastity" of Hunt's taste.)[102] One senses an inevitability about Hunt's career: while at school in Paris, he lived with his family and led a cosmopolitan and continental European lifestyle. Back in the United States, the bulk of his commissions came from family friends and his

[98] Ibid., p. 79.

[99] Ibid., p. 80.

[100] Paul Baker, Richard Morris Hunt (Cambridge, MA, 1980), pp. 111-2.

[101] Ibid. Saint also points out that Hunt differed from Upjohn in three respects and thus came to represent the new class of architect. Hunt was young, rich and trained at the Ecole des Beaux-Arts.

[102] Royal Cortissoz, Art and Common Sense (New York, 1913), p. 399.

own acquaintances "with whose needs and tastes he was familiar."[103] Throughout his life his

demeanor reflected that he had come to architecture as a vocation, driven by artistic impulse

rather than a desire to procure an income. He stood, in the words of Frank Wallis, one of the

young members of his atelier in New York City, "for the importance of his art."[104]

Balancing out Hunt's reputation as an "artist" was his commitment to professionalism.

Wallis went on to note another aspect of Hunt's personality: Hunt demanded, "the respect and

recognition which the responsibilities of the profession required." He demonstrated a willingness

to pursue "respect and recognition" even through the medium of law, initiating legal proceedings

against several of his former clients which later helped to establish the legal basis for the unique

rights of the professional. One case in particular deserves note. In the aftermath of a disastrous

relationship with one of his first patrons in the United States, Hunt sued for the payment of "usual"

fees equaling a percentage of the total construction cost. The case revolved around the question of

whether Hunt was entitled to compensation because he had provided plans even though they were

not used for construction. In winning a decision from the court the case set the precedent for the

proprietary rights of architects to their ideas and designs. Moreover, the "case did have

considerable significance in helping to establish a recognized fixed set of charges for the work done

by professional architects."[105] Serving as role model for architects seeking social status as "artists"

and legitimacy as professionals, Hunt was elected AIA President in 1888. Under his guidance, the

organization retained its goal of advancing the "art" of architecture while at the same time trying to

procure greater acceptance of the idea that architects performed a legitimate "service."[106]

[103] Baker, p. 166.

[104] Ibid., p. 165.

[105] Ibid., p. 165; 85; 87. The fee was determined by the consensus of professional opinion gathered for the trial which would later be more firmly defined by the AIA.

[106] Saint, p. 84. Later, Saint notes, "From Burnham's presidency onward, the overt motivation of the AIA became not to advance the cause of art, as Hunt had advocated over the previous decades, but to gain ever bigger and more prestigious jobs for the great practices" (p. 94).

The AIA did not go unchallenged by other professional associations of architects.[107] Of

these, the Western Association of Architects (WAA) founded in 1884 under the leadership of

Dankmar Adler and Daniel Burnham was the most prominent. Recently, historians have

attempted to understand the difference between the WAA and the AIA as the result of the two

distinct work environments of their members.[108] In Chicago, the base of the WAA and epitome of

the American "boom town," architects sold their services to real estate developers on the basis that

they provided better control over costs. Certainly the need existed in New York for economical

and rational planning of buildings which were intended to turn a profit. And, Chicago architects

were themselves asked to design the large dwellings of these business leaders, jobs for which Hunt

was well prepared. But, Chicago architects acknowledged their primary professional roles as the

designers of large urban commercial, retail and industrial buildings built as either financial

investments intended to generate profit or capital improvements to business enterprise expected to

improve profitability.[109]

The WAA expressed a similarly pragmatic agenda in its efforts to define and expand the

work of the architect. Its leadership identified three primary functions for the association: lobbying

for the state regulation of practice through licensing and registration laws; initiating legislation for

the reform of the Supervising Architect of the Treasury; and, protecting architects from client

relations that were not beneficial to them such as competitions.[110] Under the guidance of Adler

and Burnham, the WAA achieved a limited degree of success. Largely through the efforts of its

membership, Illinois became the first state to enact a licensing law in 1897.

---

[107] Ibid. See also Bannister, p. 189. There have been and continue to be alternate professional organizations
in architecture. Between 1900 and 1905, the AIA was challenged significantly as the largest professional organization by
the Architectural League of America, a group which had a commitment to "artistic" rather than "political" goals.
Between its founding in 1894 and 1930, the Society of Beaux-Arts Architects flourished, providing the aesthetic
commitments which the AIA lacked. The SBAA was particularly strong as an influence over the educational programs
which it distributed to schools through the Beaux-Arts Institute of Design, the organization of schools affiliated with the
SBAA. Turpin Bannister estimates that during the 1920's 70% of all American architecture students were involved with
BAID competitions.

[108] See Saint, pp. 87-91.

[109] On the professional roles of architects practicing in Chicago in the late nineteenth century see Dstoglu

[110] Saint, p. 90.

131

The AIA, however, succeeded in one area that the WAA could not. Although the AIA was an east coast organization, its membership had successfully begun to establish a national association of professionals with chapters in cities and states throughout the country.[111] By 1870, the AIA had chapters in Chicago, Boston, Baltimore, Cinncinati, San Francisco, and the state of Rhode Island. In 1886, twelve more western chapters were formed. As a result of its success, Andrew Saint has concluded, the membership of the WAA voted to merge with the AIA in 1889. Saint has also suggested that Daniel Burnham and his follower's in the WAA lobbied in favor of the alliance with the AIA in an effort to establish an effective "national" organization with political clout at the state and federal level. In a gesture which symbolized the spirit of the new organization, the combined membership of the AIA and WAA elected Hunt as its President, the architect whose career best combined business and art.[112] Confirming the efficacy of the merger and aided by the popular success of the Chicago Fair reflecting favorably on architects, the AIA leadership celebrated the passage of the Tarsney Act in 1893, the federal legislation permitting the U.S. Treasury Department to offer competitions for public work in which private architects could participate.[113]

After the merger, the most active agitators for reform such as Burnham resumed their work within the AIA. By 1899, the AIA had moved its headquarters to Washington D.C., closer to the political institutions it now sought to influence. The impact of the Institute was gradual but significant as is evident in the example of its efforts to make architectural registration mandatory for practicing architects.[114] By 1919, thirteen states required registration.[115] With the Post-War Committee actively supporting state registration internally and the general optimism expressed by the American public for professionals and their service outside of the ranks of its membership, the

---

[111] Baker, p. 168.

[112] Saint, p. 91.

[113] On Tarsney Act in see chapter one.

[114] Saylor, p. 43. Even after its merger with the WAA, the AIA was slow to take up the lobbying efforts for state registration. It was clear that one of the most effective means of "protecting" the architect's position was by legislation which required license of those practicing architecture and to require an architect's seal for building approval. But, the creation of legislation which restricted practice was seen by many architects as a violation of the principle, best represented by the legal profession, of self regulation.

[115] "States which have Laws Regulating the Practice of Architecture," compiled by NCARB, April 23, 1937 at Avery Library, Columbia University.

AIA administration produced a model law for state registration in 1919.[116] Within one year seven more states had registration requirements and by 1925 twenty-nine states regulated architectural practice.[117]

The Institute made substantial gains in regulating professional practice from within the professional organization as well. In 1909, the Institute adopted its first Canons of Ethics which defined appropriate methods of work. In some cases, this code functioned as a reinforcement of the profession's claims for legal protection of their area of work. For example, from the outset the Canons of Ethics forbid architects to perform the services of a contractor. On the one hand, this canon offered a form of self-regulation derived from the idealistic model of national leadership offered by Progressivism. On the other hand, it supported the AIA's justifications for state registration, a legally defensible monopoly on work, on the basis that the architect "served" without an economic interest in the outcome of the building process. Thus, the professional could uphold the principles of the "public good" in the carrying out of his work and the exercise of his judgment.[118]

The AIA used other means besides its ethical code to establish definitions of practice that restricted its members to areas of work consistent with its overall program of professional legitimization. The Institute's first standardized contract documents for architects intended to delineate the practitioner's responsibilities were published on September 5, 1888 by the AIA working in conjunction with the WAA and the National Association of Builders.[119] Then, in 1911, the Institute published its first edition of the "Standard Documents," integrated contracts which separately described the architect's working relationships with the "owner" and "contractor" and

---

[116] Ibid. See also "Model Form of Law for the Registration of Architects," appendix V in AIA Handbook.

[117] In 1930, 31 states had registration legislation. The AIA continued its efforts adding seven more states by 1935. These registration laws did not necessarily make all building subject to the same requirement that they be designed and submitted for approval by an architect. In most cases, only the plans of buildings above a certain size required an architect's seal.

[118] "The Canons of Ethics," in AIA Handbook, p. 109.

[119] "AIA Contracts 100 Years Old," AIA Memo (October 1988): p. 2. That committee developed a Uniform contract, applicable to both architect/owner and contractor/owner relationships, which was copyrighted and sold by the AIA.

which provided for several acceptable methods of compensation.[120] In its schedule of typical

"fees," the Institute set limits that established the minimum percentages for which an architect

should take work that varied according to the complexity of the job.[121]

In contrast to the explicitness of its legal and ethical delineations of practice, the Institute

made no pronouncements on the issue of "style" or aesthetics. To fill the void, the powerful Society

of Beaux-Arts Architects (SBAA) founded in the 1890s and headquartered in New York City,

pronounced its support of Ecole methods in teaching and as a design approach. To encourage

American schools to adopt the teaching program, the SBAA sponsored competitions. By 1915,

fifteen of the twenty American schools of architecture were competing in the Society's

competitions, nine had French critics and thirteen had Ecole-trained American critics. By 1928,

thirty-one of forty-eight schools in the United States were affiliated with the Beaux-Arts Institute

of Design (BAID), the academic arm of the SBAA. In that year 2146 students submitted 8151

drawings to the annual competition. Approximately 70% of all architecture students in the U.S.

were involved with the BAID throughout the 1920s.[122]

A key to the AIA's continued success as a professional organization was its ability to retain

the appearance of a national body whose work was disengaged from and did not interfere with

localized dilemmas of professional practice. The AIA was headquartered in Washington D.C.

although some of its agencies were located in New York City such as the Journal, and, after 1923,

the Scientific Research Department and the affiliated Producer's Research Council.[123] Following

a reorganization in 1915 which reaffirmed the relationship between the Institute and its members,

the national body became the central authority presiding over the affiliated Chapters (the city,

---

[120] AIA Handbook, p. 17. In 1920 the AIA advised that the "Owner" engage a "General Contractor," one who was responsible for all the work related to a project and its coordination. In 1913, the delegates to the Annual Convention endorsed the system of separate contracts in lieu of the General Contractor. With this contractual set-up, the Owner assumed the responsibility for letting individual contracts and coordinating between the various trades. In these cases, the services of the architect became more valuable insofar as his expertise in management -- and not merely inspection -- of the construction process augmented the Owner's.

[121] AIA Handbook, p. 15. In 1920, the minimum fee was 6% for normal construction, but between 8% and 10% for a house and 10% or more for alterations to existing buildings.

[122] Bannister, p.189.

[123] The AIA was incorporated in the State of New York and listed as its New York address the headquarters of the New York Chapter in its by-laws in 1920.

state, or territorial organizations incorporated under the laws of the State in which they were headquartered).[124] The primary administrative body of the national organization was its Board of Directors which consisted of the officers (President, two vice Presidents, Secretary and Treasurer), nominated and elected yearly, and directors who represented regions of the country and who served for three year terms.[125] According to the By-Laws, the Board had the responsibility of maintaining the Institute between conventions by rendering decisions in membership disputes which might arise as a result of an alleged breach of the Canon of Ethics and by overseeing financial matters. Moreover, the Board had wide discretionary powers in the course of fulfilling its responsibilities to preserve the Institute. The By-Laws indicated that:

> ...[the Board of Directors] shall have full power and authority, and it shall be their
> duty to do all things within the limitations fixed by the Constitution and By-Laws
> which in their opinion, shall be conducive to the welfare of the Institute.[126]

The organizational structure of the AIA administration matched the Institute's goal of distinguishing between the questions of practice which only affected architects working within a single regional economic and political context and matters of "principle" such as the regulation of advertising or components of its national lobbying efforts such as the solicitation of the federal government for work.[127]

Individual members had little direct involvement with the actions of the national Board which carried on its activities independently throughout the year. Delegates representing the Chapters voted once a year on issues brought before the convention. This structure isolated the decision-making process from the membership at large and protected against the confrontation of values which might ensue were architects from different regions and different working environments to attempt to reach a consensus about what constituted "ethical" professional

---

[124] Saylor, p.23. In 1916, chapters were established throughout the United States according to geographical territories, replacing the former practice of "members-at-large" in areas which did not have a local chapter.

[125] See "Constitution and By-Laws" in AIA Handbook, pp. 173-175. The term of president was one year and could be extended through re-election by one year. Officers were elected by a vote taken of delegates attending the annual convention. Nominees were selected by either the Board of Directors or could be proposed by at least fifteen members from at least two chapters. This mechanism gave the Board of Directors the ability to control the names entered into the election for officers.

[126] AIA Handbook, p. 182.

[127] Charles Whitaker, "Post-War Committee - Preliminary Conclusions," AIAJ 7 (September 1919): p. 392.

behavior. Nevertheless, special interests did fall into conflict around motions that came to the convention floor year after year in a see-saw battle between factions.[128]

In order to avoid confrontation, decision-making was removed yet another level from that of the Board of Directors and the membership. The Board met at least twice yearly, its first meeting taking place thirty days after the last convention at which time it elected its Executive Board. The Executive Board consisted of five Directors including the President and Secretary. Although the full Board of Directors determined what the special focus of its year-long tenure would be, it was the Executive Committee that actually implemented these programs, determining membership qualifications, controlling all of the funds and property of the Institute and formulating new regulations.[129] Through the devices of this institutional structure, then, the AIA was able to suppress dissent by avoiding discussion on substantive issues of policy at the level which the membership was involved.

As an organization, the AIA matured quickly in the 1920s. Successive Boards of Directors became proficient at utilizing the Institute's organs of communication -- conventions, circulars of advice and its *Journal* -- to reach out to architects widely dispersed through the United States.[130] The Executive Board scheduled its regular meetings in the cities where chapter headquarters were established in order to bring the Institute into closer view of its members though their participation was minimal.[131] The Institute used the annual conventions to disseminate information and new ideas that it chose to infuse into professional practice. The Post-War Committee, for example, was first introduced at the convention of 1919. Certainly, to the architects who attended the convention,

---

[128] The Architect's Small House Service Bureau and the associations known as Allied Architects both raised hotly debated and seemingly unresolvable questions about professional practice which were discussed at successive conventions throughout the 1920s.

[129] In order to encourage a sense of closeness between the Executive Committee of the national organization and state and local chapters, the officers requested that chapters invite them to their cities or districts and sponsor their semi-annual sessions in 1922. Conventions were also occasionally held in cities other than New York and Washington D.C. In 1919 the convention was held in Nashville, Tenn. In 1927, the convention was held in San Antonio, Texas.

[130] Among the circulars available to the architect between 1919 and 1930 were those dealing with the principles of professional practice, competitions, various types of contracts between clients and contractors, and filing systems for technical information. Beginning with the first AIA *Handbook* compiled by Frank Miles Day in 1919, the AIA offered indexes of its documents and remarks on the proper process to follow in the execution of work from initial design stages to final payment to contractor.

[131] "The President's Address," *AIAJ* 12 (June 1924): p. 273.

the program of the committee was challenging. Yet, it did little more than to outline its work. The proposals reached a year later represented the consensus of its own members.

Conventions were also opportunities for the Institute to stage a demonstration of solidarity and self-congratulation. The commitment to improve the prospects for work which characterized the conventions of 1919, 1920, and 1921, gave way in 1923 -- in the wake of tremendous improvements in the economy -- to a theatrical display. Henry Bacon, architect of the Lincoln Memorial, was awarded the AIA Gold Medal on the steps of his building in a ceremony held at night and lit by torch. Crossing the reflecting pool by barge, Bacon processed up the steps of the monument where he received his medal from then president, Warren Harding (fig. 2.5). Harry Cunningham recorded the passing of the procession, using images that conveyed his sense of full participation in the awesome event choreographed by the AIA officers. Cunningham wrote that,

> ...a fine big car, brilliantly lighted and very real, came up to the foot of the steps and the Dream having been suspended for the moment in the usher's mind, the President of the United States was properly received. He was escorted up the steps of the memorial and between two central columns he awaited the arrival of the Pageant - or should one say, he awaited the climax of the Picture. There appeared away off, at the far end of the Pool a little speck of light that separated itself from the luminous line of the Marquee. Slowly - oh so slowly, it seemed - it grew bigger and perhaps brighter. There was music - beautiful music - soft and slippery like the rain. Presently one could distinguish a colored form behind the speck of light that was coming toward us. It seemed to me that the Universe had somehow grown tremendous...[132]

By the beginning of the 1920s the AIA had established itself as the institutional agent of professionalization. In its merger with the WAA it assumed the mantle of a governmental lobby group for architects. Out of the ranks of its membership came those architects who established the role models of the practitioner and gave an example of the types of work which the architect was uniquely able to perform. Through its efforts to institute registration, the AIA helped to establish controls on the practice of architecture, both defining and protecting the professional terrain. Its Canons of Ethics and contract documents provided institutional mechanisms that guaranteed effective and competent work. Conventions, newsletters, committee correspondence, and

---

[132] Harry Cunningham, "The Convention - As One Architect Saw It." AIAJ 11 (June 1923): p. 239.

"circulars of advice" that described appropriate practice maintained a vital communication link between the Institute and its membership. As the organization weathered change its importance to its members increased, providing a stable element by which architects could define themselves within the context of a changing work environment.

The AIA as Liaison to Institutions of Business and Government

The Institute complemented its efforts to solidify the profession internally with an equally effective program of communication with organizations representative of other interests operating within the construction industry. The Directors had long relied on sub-committees to keep them abreast of changes in the conditions of professional practice that might warrant a response from the Institute; and committees such as those on Competitions, Registration, Contracts, Ethics, and Education kept the Board informed about issues relating to the activities of individual architects and their practices.[133] The Committee on Public Works and the Committee on the Plan of

---

[133] In 1926, the Annuary of the AIA recorded the following Committees and their chairmen:

Standing Committees:	Chairmen:
Committee on Contracts	Thomas Snook
Committee on the Allied Arts	C. Grant LaFarge
Committee on Public Works	Abram Garfield
Building Committee	D. Everett Waid
Committee on Education	George Nimmons
Committee on Competitions	Charles Butler
Committee on Public Information	William H. Beers
Committee on Finance	Charles Higgins
Structural Service Committee	N. Max Dunning

Special Committees:	Chairmen:
Committee on Community Planning	Henry Wright
Committee on Registration Laws	William Bannister
Committee on School Bldg. Standard	John Irwin Bright
Committee on Plan of Washington	Horace Peaslee
Committee on Small Houses	C. Herrick Hammond
Committee on Foreign Relations	William Emerson
Committee on Industrial Relations	Robert Kohn
Committee on Architectural Relations	Harry Stephens
Committee on Jurisdictional Awards	Edward Lee

Subcommittees were formed to address special topics or areas of particular concern such as the Post-War Committee. The Committee on Architectural Relations was, for example, a temporary committee assigned the task of

Washington followed the activities of the Office of the Federal Architect and the building

programs organized under the Treasury Department. In the 1920s, in response to a growing

demand within industry and government for information exchange, the Board instituted several

new committees which became the medium of contact between the AIA and other technical,

industrial and governmental agencies as well.[134] As the phenomenon of the trade association grew

with the support of the Department of Commerce and as the Department itself turned increasingly

toward technical organizations to participate in its many conferences on the elimination of waste,

the AIA Board was compelled to create committees whose task it was to relieve the pressure to

participate. Successive boards developed the Materials and Methods Committee, the Committee

on Industrial Relations, the Committee on External Activities, the Committee on Architectural

Relations, the Structural Service Committee, and the School Building Standards Committee to

assume the growing burden of representing the architect in discussions dealing with proposed

changes in construction methods.

These committees responded to the growing pressure after World War I to adapt to the

demands of the "associational state" demonstrated, for example, by the AIA's participation in the

Congress of Building Industries.[135] Like the Institute, that organization located itself in

Washington D.C. where it could properly represent the building industries to the Federal

Government through the offices of the Commerce Department.[136] Within the context of these

affiliations between the AIA and other trade and professional associations, the committees also

represented the interests of the architect in deliberations about how to form new modes of

---

polling the membership to determine what practitioners thought of their work and the efficacy of the Institute's Canon of Ethics.

[134] See D. Knickerbocker Boyd, "For a Better Cooperation Between Architects, Engineers, the National Government and other Organizations," Arch 39 (February 1919): p. 50.

[135] Executive Committee Minutes, April 23, 1918, AIA RG 510-2; and April 27, 1918, p. 15, AIA RG 510-2.

[136] In 1920, the Post-War Committee similarly advised that the AIA seek to establish closer ties between the architect and other players in the construction industry. See "A Congress of the Building Industry," AIAJ 8 (September 1920): pp. 340-341. In 1922, under the guidance of the Federation of American Engineering Societies, the group that had initially sponsored a meeting was convened which combined engineers, architects, contractors and labor representatives at which it was resolved to form a new national body. The National Federation of Building Industries was founded later that year and architects were represented by Robert Kohn and Alfred Nimmons. Executive Committee Minutes, March 31, 1922, p. 6, AIA RG 510-3. Nimmons, an architect from Chicago, established a career in industrial and commercial building.

practice. D. Everett Waid, President of the AIA, reminded the committee chairmen of their role

in 1925 asking that their reports state their opinions,

> ...as to the degree of danger evident or inherent in modern developments in
> building operations to the proper status of the architect; the causes which have
> produced those dangers if any; and the policy or program of procedure which the
> Institute should follow insofar as possible to protect the profession and to lead it
> into a stronger position in which the status of the architectural profession is the
> real head of the building industry can be maintained and strengthened.[137] (my
> emphasis)

Committee work grew more complex as a result of the work being done with the

Commerce Department and with manufacturers. In 1926, AIA President Milton Medary proposed

a new format for the Executive Committee meetings that would allow the AIA leadership to

coordinate its efforts in the many areas it worked. Prior to the semi-annual meetings, Medary

asked that the committee chairmen submit a report of their activities and remain to discuss with

their peers sitting on other committees the possibilities for coordinated activities. In calling for the

procedure Medary said that, "The object of such a conference which has not been attempted

before in Institute procedure would be to discuss Committee work...to exchange ideas, harmonize

programs and to generally weld the leaders of the Institute into a smooth running and harmonious

group each doing its job with a good understanding of the whole situation."[138]

As the Institute improved its presence within the construction industry, communicating

with trade representatives and materials manufacturers as well as the standardizing committees set

up by the Department of Commerce, it assumed an increasingly important role as the focal point

through which information about technical innovations and product developments could be

transferred to the offices of practitioners. The Journal in particular enhanced this function of the

AIA, setting a precedent for the role of the Institute's publications in professional practice. Before

the war, the Directors set up the Materials and Methods Committee whose responsibility it was to

make information about new products available to architects. In 1917, the Journal established a

separate Structural Service Department to channel this information directly to the membership.

Headed by D. Knickerbocker Boyd, the Department published a monthly "history of the

---

[137] Executive Committee Minutes, December 1925, p. 13, AIA RG 510-3.

[138] Executive Committee Minutes, October 1926, p. 2, AIA RG 510-3.

continuous advance in building methods." In preparation, the editorial staff of the Journal

described the goals of the Structural Service Department in October of 1916.

> First: Bring into active cooperation with the work of the Institute every allied effort which is being made to standardize building methods and materials.
> Second: Give to architects a monthly classified index of all such work easily available and at the minimum of cost.
> Third: Encourage architects to make use of all standardizations whenever they have been reached and passed upon by competent organized bodies.
> Fourth: Encourage manufacturers to continue, through properly constituted bodies, their efforts toward solving problems of standardization, to the end that the resultant savings may reduce the cost of building.
> Fifth: Through the quick and orderly dissemination of all such information, bring the architect, the producer, and the manufacturer into the closest possible contact, without loss of time and with minimum of expense to each.[139]

The Structural Service Department created twelve categories which corresponded to

sectors of the construction industry, the number being chosen to accommodate the monthly format

of the Journal.[140] The department editors listed and codified government departments, technical

organizations, testing societies, and professional associations which were involved in the

development of standards for materials, construction methods, or performance of building

components, offering the architect a complete index of sources of information. In 1918, the

Journal published the Structural Service Book which compiled the work of the Department and

provided a single source for all of the information that Boyd and his staff had accumulated over the

year.

The importance of this new vehicle for communicating information about materials and

construction methods was not lost on manufacturers who regarded the comprehensive listing as an

advertising medium that put them directly in touch with architects across the country. The

Structural Service Book concluded with an "Industrial Section" consisting of advertising indexed

---

[139] D.Knickerbocker Boyd, ed., Structural Service Book Vol 1: A Revised Reprint from the Twelve Issues for 1917 of the Journal of the American Institute of Architects Structural Service Department (Washington DC, 1918), p. ii.
[140] The Serial Numbers and titles of each monthly installment were as follows: 1) Research and General Standardization, Foundation Requirements, Damp-proofing, Cement and Concrete, Iron and Steel; 2) Lime, Sand and Gravel. Stone Masonry, Stone and Slate; 3) Clay Products and Fire-Resistive Construction; 4) Fire Prevention and protection; 5) Timber, Lumber and Wood Construction; 6) Electricity; 7) Gas; 8) Construction by the Government; 9) Plumbing and Public Health; 10) Heating and Ventilating, Mechanical Equipment in General; 11) Metal, Plastic and other Products; 12) Paints and Painting, Glass and Glazing, Concluding Section 1917.

according to the new standards developed by B: :. It displayed elevators, light fixtures, radiators, window units and other components together with standard specifications that could be incorporated directly into the architects construction documents (figs. 2.6, 7a, b, 8). In addition to providing technical information on products, the ad copy emphasized the support which these industrial associations were willing to provide to the architect thus expanding his knowledge and ability to exercise judgement even in areas of building function serviced by new and unprecedented materials and equipment.

In 1926, Milton Medary looked back to 1917 and characterized the intervening nine years of Institute activity as having been dominated by "Structural Service work", intending to imply that a kind of movement had been initiated which dominated the professional discourse. There were several reasons for this. Under Boyd's leadership between 1917 and 1918, the Structural Service Department had the mission of creating a source of information for architects in order that their design work would be done according to the most contemporary construction techniques and would take full advantage of newly developed materials. The success of the department's work was also due to the desire on the part of the AIA directors and, in particular, Charles Whitaker to funnel advertising through the Journal. As early as 1918, Whitaker was attempting to broaden the advertising base of the Journal by creating a context in which the promotional jargon of manufacturers was camouflaged by the matter-of-fact reporting of the Structural Service Section.[141] In the spirit of "associationism", Whitaker proclaimed that these technical descriptions did not constitute advertising but were merely information passed from one body of experts to another. He also argued that the simpler formats of technical notes would ultimately reduce the confusion among architects about what products did or how they were used as well as their performance criteria.[142]

---

[141] Charles Whitaker, editor-in-chief of the AIAJ openly admitted that the effort to provide a medium for advertising of products to materials manufacturers was part of a plan he had to fortify the Journal's advertising revenues. See Executive Committee Minutes, January 1918, p. 16, AIA RG 510-2.

[142] Whitaker was involved from the outset in the movement for the reform of advertising which was later institutionalized in the Producer's Research Council. See his editorial, "Shadows and Straws," AIAJ 9 (December 1921): p. 373. In 1921, he proposed that the AIA sponsor a meeting of "materials manufacturers" to create better advertising for architects. Executive Committee Minutes, October 6, 1921, p. 2, AIA RG 510-2.

Concerned with competition for advertising revenue from other professional magazines such as Architectural Record, American Architect, and Architectural Forum, Whitaker regarded the work of the Structural Service Department as critical to the Journal's future. But, in identifying the necessity for improving the quality of product descriptions, he was also responding to a new and dynamic relationship between architects and producers of manufactured building products and equipment which manifested itself with increasing vigor after the war. Even before 1915, architects had growing access to components produced by industry and incorporated as pre-finished equipment into the building. After 1918, the encouragement to exchange information and standardize components that came from the government, the military, and their centralized purchasing agencies initiated by Wilson's war boards resulted in the development of standard material and equipment specifications that facilitated the bidding process for federal contracts.[143] During the war, D.K. Boyd sought to expand his work for the Journal and to draw the AIA more deeply into the process of governmental selection of materials for war-related production by founding the Structural Service Bureau in Washington D.C. Boyd's intention was to provide a showroom for manufactured products that gave government purchasing agents the opportunity to see first hand the products whose specifications they were using as a standard in their materials and performance descriptions. In 1918, the Board of Directors of the AIA sanctioned the Bureau as a legitimate professional enterprise. Their minutes record the authorization:

> Whereas one of the great problems confronting the government in its efforts to speed up war construction is the lack of a central source of information in Washington where there may be had quick and accurate knowledge of the nation's vast resources in building methods, appliances and materials, and,
> Whereas the establishment of such a central bureau would effect the greatest savings of time, labor and expense on the part of those charged with dealing with the intricate and complex problems involved by the war and its attendant conditions,
> Be it resolved by the Board of Directors of the AIA in session January 1918 that the Committee on publications, and the Committee on Materials and Methods be jointly charged with the duty of presenting to all manufacturers and producers of building materials in the United States as far as practicable, a plan for establishing in the city of Washington, a Structural Service Bureau where may be assembled for the information of Government an exhibit or display of every possible material, appliance, device or structural information which would in

---

[143] See following chapter especially "Building Production during World War I."

anyway contribute to the speedy and efficient construction of whatever structures are needed.[144]

The costs of the Bureau were to be born jointly by the AIA, manufacturers and subscribers to the Bureau who used it as a source of information.

The idea of creating an agency within the AIA to coordinate the exchange of information between practitioners, government, technical associations, and builders remained compelling after the war. At the Convention of 1919, the delegates voted to support a Structural Service Committee, a subcommittee to the Board of Directors. Under S.W. Jones, the Committee kept abreast of the work that the AIA committees such as the Basic Building Code Committee and the Committee on Materials and Methods were doing in collaboration with trade associations and the federal government.[145] In 1921, Jones reported that his committee was affiliated with seventeen joint committees "cooperating on standardization work."[146] By 1922, the Board of Directors appointed the Structural Service Committee as the official liaison to the Department of Commerce to participate in its trade conferences dealing with any aspect of the construction industry.[147]

As Charles Whitaker would later contend, the Structural Service Department's published materials constituted free advertising in the form of the technical briefs which it made available to the practitioner. (Ironically Whitaker, who had been a central figure in the efforts to transform the AIA into a medium for the dissemination of technical information, complained that the Structural Service Department had caused the Journal to lose revenues from advertising.[148]) At the same time, the Committee focused its attention on the methods by which manufacturers advertised their products. In 1922, under the directorship of Stephen Voorhees, it entered into this research more directly with the formation of two related organizations under its jurisdiction, the Producer's Section and the Consumer's Section, whose purpose it was to create agencies within the AIA

[144] Executive Committee Minutes, January 19, 1918, pp. 38-39, AIA RG 510-2.

[145] For example, in 1920 E.W. Donn, chair of the Basic Building Code Committee, reported that together with the Structural Service Committee he was participating in the Commerce Department's Bureau of Standards in their work on a single uniform building code for the U.S. See Executive Committee Minutes, March 5-6, 1920, pp. 6-7, AIA RG 510-2.

[146] Executive Committee Minutes, Oct. 6, 1921, p. 1, AIA RG 510-2.

[147] Executive Committee Minutes, March 31, 1922, p. 2, AIA RG 510-3.

[148] Executive Committee Minutes, December 1922, p.6, AIA RG 510-3.

oriented to the information user. It had been the committee's intention that the Producer's Section

would be composed of manufacturers paying subscriptions for which they would receive advice on

the most appropriate formats for information as well as the inclusion of information on their

products in the Bureau's published material. At the same time, the committee envisioned the

Consumer's Section as an affiliation of architects to whom information on new products and their

standard performance characteristics would be sent on request.[149]

Under its chairman, Max Dunning, the Producer's and Consumer's sections of the

Structural Services Committee set standards in the size, character and referencing system used by

manufacturers to advertise their products. In 1925 the AIA issued its "Circular on Advertising"

which coordinated the filing systems that architects used in their offices with the published material

distributed by manufacturers.[150] As noted in the AIA's "Objects and Programs" Circular of 1927,

> As a result of its collaboration with the national organizations of the producers of
> materials, the national advertising of these producers to architects has been
> revolutionized, standardized in size and indexed ready for Architect's files. The
> Department has developed an architectural index and filing system and answers
> thousands of inquiries regarding the methods and materials of construction.[151]

The AIA "Circular on Advertising" implied several distinct levels of change in architectural

practice. First, the Circular -- together with the work of the Structural Service Committee --

established the AIA as an intermediary between manufacturers and architects. Second, it

demonstrates how the AIA created the expectation among architects that the need for building

components and materials could be uniquely satisfied by industrially produced goods. Statistical

reports on the building trades and productivity in the building industry suggest that as industrially

produced goods assumed a greater role in construction, the efficiency of the building process itself

increased as a consequence of the progressive elimination of on-site, "craft" production.[152]

---

[149] Ibid., p. 7. See also Executive Committee Minutes, September 8-9, 1922. The Structural Service
Committee published a pamphlet in 1922 to attract architects and manufacturers to the Producer's and Consumer's
Sections called, "The Architect and the Building Business." 10,000 copies were printed and distributed.

[150] "Circular on Advertising," in the AIA, The Handbook of Architectural Practice (Washington DC, 1925).

[151] AIA, The Handbook of Architectural Practice (Washington DC, 1927), p. 187.

[152] In 1940, Stanford University assembled statistics outlining changes in work in the United States. The
authors noted that "changes in construction methods have resulted in the employment also of factory workers to prepare
ready-made materials and special tools now used in erecting buildings." H. Dewey Anderson and Percy Davidson.
Occupational Trends (Stanford, CA, 1940), p. 172.

Architectural design became a process of selection and construction a process of assembly of industrially produced commodities. Thus, the role of labor changed.[153] Writing in the 1940s, a report compiled under the auspices of Stanford University noted that in the 1920s, "the use of fabricated doors, windows, girders, floors, walls, roofing, and interior fixtures has caused a displacement of many skilled artisans who formerly constructed these articles entirely on the premises during the process of building."[154] The "Circular on Advertising" was therefore part of a larger movement for the transformation of the work performed on the construction site which, between 1920 and 1930, changed the role of the architect and the relationship of the construction worker to the construction process.

Despite its success and impact on the profession, the AIA Board of Directors voted in 1923 to temporarily suspend the activities of the Structural Service Bureau and to extricate itself from the Producer's Section due to the financial burden they placed on the Institute. However, recognizing the value of an unobstructed pipeline to the architectural profession which the Producer's Section offered, several manufacturers arranged themselves to continue the Bureau's work by founding the Producer's Research Council, an independent organization which operated in "affiliation" with the AIA.[155] In place of the Structural Service Committee, the AIA developed its Scientific Research Department headed by Max Dunning which took over the role of liaison with government and trade associations. The Structural Service Department of the Journal remained as a clearinghouse for information until the magazine folded in 1927.

The transition of the AIA through its committees and publications from an information gathering agency in 1918 to an organization which contrived new formats for distribution of that information demonstrates the increasing significance that the Institute administration placed on establishing its role as a connection between industry and the professional. Moreover, the Structural Service Committee predicated its development of efficient mechanisms for information exchange on the notion that the architect was the consumer for these products. Lyman Clark, a

---

[153] Ibid., p.173.

[154] Ibid.

[155] See N. Max Dunning on the history of the Structural Service Committee, Executive Committee Minutes, February 1925, p.4, AIA RG 510-3.

representative of General Electric and avid supporter of the Producer's Research Council noted

the growing awareness by industrial manufacturers of building materials and components that

architects represented a significant market for their products.

> In adopting the resolution creating a Producer's Section of the Structural Service
> Committee,...the American Institute of Architects laid the foundation for a
> greater appreciation of industry by architects and assuredly a greater appreciation
> of architects by industry.[156]

Expanding the Authority of the Profession: AIA Membership and Professional Advertising

In the context of these efforts to strengthen the position of the Institute and the profession

within the construction industry, the AIA's policies toward membership and advertising reflected a

growing intolerance for the trappings of professional elitism. The recommendations both to

broaden the membership base and to appeal to a mass-audience made by Kimball and the Post-

War Committee and then carried out by successive AIA administrations during the 1920s flew in

the face of pre-war professionalism characterized by its pretense to a social intimacy between

architect and patron. From the perspective of a professional "consciousness," these strategies of

"democratization," the one offering plurality among practitioners and the other promising a wider

public diffusion of architectural "services," suggested that the canons of artistic and intellectual

exclusivity were weakening.[157] But, they also fulfilled the professional agenda to procure a broader

influence for architects and their work within the construction industry. Whereas a membership

constituting a higher percentage of practicing architects promised greater clout for the Institute in

its participation in industry-wide associations, advertising increased the market for their work.

Although Kimball did not see his efforts to "democratize" the Institute bear substantial

results within the period of his tenure as AIA President, membership did begin to increase sharply

over its pre-war numbers in the 1920s. From 1890, when the AIA joined with the WAA, until 1920,

the membership of the AIA grew at a steady but modest rate.[158] By comparison, the period

---

[156] Lyman Clark, "Architects and Industry," AIAJ 10 (August 1922): p. XIII.

[157] See for example Charles Chubb's comments in "The Question of State Societies," AIAJ 8 (May 1920): pp. 187-93.

[158] Saylor, p.30.; Bannister, pp. 72-90.

between 1920 and 1930 saw tremendous growth going from a membership of 1300 to 3400, far exceeding the levels of growth which occurred over the previous 30 years (fig. 2.9).[159] The jump in growth was partially the result of the efforts of Kimball and the Post-War Committee.[160] In his address to the 53rd Convention, Kimball noted that "membership must be made both more attractive and more easily attained," and he was willing to go some distance to achieve a better representation of architects in the AIA. He proposed a substantial and permanent reduction in the annual dues.[161] Noting that many practicing professionals chose not to join the AIA because it forbid them to do work for fees below those established by the Institute, he recommended that the Canons of Ethics which prevented competitive pricing be reexamined.[162]

The effort to expand membership did not go unchallenged by those members of the AIA who wanted to retain the exclusivity of former years. In the context of the debate generated by the Post-War Committee, many architects expressed the desire to limit membership as a means of insuring that the AIA was only associated with professionals doing the highest quality work. Glenn Brown spoke for many of his fellow members when he said that "one member of the Institute whose standing and character is a light to the country is of more value than a dozen men who are unknown or not favorably known."[163] Yet, those who desired to increase the AIA's representation of architects prevailed. In 1925, the Executive Committee instituted a campaign which shifted the burden of expansion onto the local chapters. They devised a quota system which required that each chapter boost its membership according to its size, demanding that for each five chapter members, one new member be introduced.[164]

---

[159] Saylor, p.30. See also Executive Committee Minutes, November-December, 1927, AIA RG 520-3. Saylor provides a chart of growth of membership which indicates that between 1890 and 1920, the membership level went from around 400 to 1300. In 1920 the membership stood at 1464 and by 1927 it had risen to 3057. The fastest growth occurred between 1920 and 1921 when membership rose 46.6% to 2148.

[160] Kimball, "Address - 53rd Convention," p. 221.

[161] Executive Committee Minutes, April 28-29, 1919, p. 2, AIA RG 510-2. "In sending out this notice to the membership it is to be preceded by a statement that it is the desire of the Board of Directors to greatly increase the membership of the Institute and to make the Institute truly representative."

[162] Kimball, "Address - 53rd Convention," p. 221.

[163] Cited in "Question of State Societies," p.187

[164] Executive Committee Minutes, December 1925, p. 15, AIA RG 501-3. It was suggested that one new member be admitted for each five current members. No chapter should introduce less than 2 new members and for chapters over 100, one new member for each 10 was recommended.

One of the restrictions to an increase in membership was the complexity of the application process which required that architects be admitted to a chapter as an "associate" before applying to the national organization for full membership in the AIA.[165] At each step, selection was made on the basis of voting and "blackballing" was permitted. Many members proposed alternatives to this process. William Stanley Parker, Secretary to the Board of Directors, suggested instead that registration in the prospective member's state be made the only requirement for admission into the AIA.[166] In 1920, a motion by the Illinois Chapter introduced a resolution which proposed the formation of State Societies admitting every registered and licensed architect as a matter of course.[167] The purpose of State Societies, as F.E. Davidson noted, was "to extend the influence of the Institute."

Davidson went so far as to propose that a special category of membership be created to accommodate even those individuals such as draftsmen who were not registered but who took their livelihood from architectural practice. Years later, Henry Saylor looked back to the 1920s and noted that this aspect of the membership movement was inspired by the fear of unionization among draftsmen. By urging the chapters to create a society for draftsmen, they "would regard their calling as a profession and not as a trade," Saylor wrote.[168] Charles Whitaker similarly identified the fear among professionals for a collective organization of draftsmen. "There is scarcely a line of human activity," Whitaker wrote, "where men and women are not discussing either the formation of a new organization or the means by which an already established one may exert pressure against the forces that menace its members...and touching the profession of architecture very keenly, there are the proposed draughtsmen's unions."[169]

The movement for the expansion of membership represented both a change in the role of the AIA in the professional lives of most architects and a change in the relationship between professionals encouraged by the Institute. By opening up the membership and striving for greater

---

[165] Saylor, p. 30.
[166] "State Societies," AIAJ 7 (July 1919): p. 333.
[167] "Question of State Societies," p. 185.
[168] Saylor, p. 38.
[169] Charles Whitaker, "Post-War Committee - Preliminary Conclusions," AIAJ 7 (September 1919): p. 391.

representation, the AIA gradually reduced the differentiation between architects on the basis of their skill, training, or social position. And, by increasing the number of members, the AIA transformed itself from an elite organization representing only the most respected professionals to an organization which drew its authority from the number of architects it represented.[170] This change reinforced the role of the Institute as the representative body of individuals bound by their related experiences at work rather than an exclusive organization pushing for excellence in the field.

As the emphasis of the professional organization's efforts to protect the value of the architect's "service" shifted from the preservation of the high art status of their work to the validation of its importance to maximization and profitability in the construction industry, the taboo against advertising also changed in principle and magnitude.[171] While rate-cutting and personal aggrandizement were still thought to compromise the professional claim for disinterested service performed in the interests of the public, advertising offered a means of addressing a wide audience of potential clients and a popular constituency supportive of the monopolistic aspirations of the profession. Recognizing this, the AIA changed articles twelve and thirteen of its "Circular of Advice Relative to Principles of Professional Practice and Canons of Ethics" to distinguish between publicity and advertising in 1919:

> Publicity of the standards, aims and progress of the profession, both in general
> and exemplified by individual achievement, is essential. Advertising of the
> individual, meaning self laudatory publicity procured by the person advertised or
> with his consent, tends to defeat its own ends as to the individual as well as to
> lower the dignity of the profession and is to be deplored.[172]

---

[170] The question of membership qualifications were repeatedly raised throughout the 1920s. In 1927, the AIA Committee on Architectural Relations submitted questions to the membership to determine the consensus of opinion about practice and the Institute. Among these questions was that which dealt with membership, asking if standards should be "notable achievement" or "reasonable competence." "Mental Cross Section of the Institute," AIAJ 15 (March 1927): pp. 105-112.

[171] Advertising has long been a controversial issue within the professional discourse. The Canons of Ethics adopted by the AIA in December of 1909 prohibited advertising but removed the restriction in the revision of December 1912. In the Handbook of Architectural Practice published in 1920, a distinction was made in the "Circular of Advice Relative to the Principles of Professional Practice and Canons of Ethics" between advertising which publicized the profession at large, which was encouraged, and advertising which publicized an individual architect, which was strongly discouraged. On advertising, see also Saylor, p. 105.

[172] "A Circular of Advice Relative to Principle 'rofessional Practice and Canons of Ethics," in AIA Handbook (1920), p. 108. The question of what constitute ertising was constantly debated throughout the AIA's history until the 1970s when the Canons of Ethics were ruled by the Supreme Court to restrict free trade. However,

Throughout the early history of the AIA, its Canons of Ethics created rules of practice that restricted the competitiveness of architects against one another. These restrictions functioned well when the architect was working in an area for which he was uniquely qualified. But, as they were challenged in their work by others outside of their profession, or as they attempted to expand the scope of their "services", architects were constrained by their commitments to professional ethics. In 1925, C.H. Blackall, an institute member from the Boston Chapter, wrote to the Executive Committee complaining that the Canons of Ethics were "antiquated".[173] Blackall noted that in the New England area, where there were no registration laws, architects found themselves competing with large engineering and construction companies that had architectural departments and that provided comprehensive services. Blackall added that these firms were advertising and achieved a public notoriety that challenged the role of the architect.

The Executive Committee responded by addressing the issue at a subsequent meeting which it held in Providence, Rhode Island in October of 1926. Speaking on behalf of his chapter, Hubert Ripley, President of the Boston Society of Architects, remarked that "these firms are not bound by the rules of the Institute and many of them maintain "contact men" or salesmen who create favorable impressions upon building committees and secure large amounts of work which should properly go to architectural firms." The Executive Committee responded by recommending that the Boston Chapter itself assume the responsibility of advertising the architect, taking the place of the large organization which the private practitioner lacked. The outcome of this exchange was the Executive Committee's conclusion that it was permissible for the professional organization itself to engage in competitive practices to ward off the intrusion of other experts into the area of work of the architect.[174]

The question of "competition" from other disciplines was frequently raised as the profession moved to claim back its territory from other experts in the construction industry. Responding to fears that the architect was not doing enough to retain his position, D. Everett Waid

---

architects still refrain generally from direct advertising on the basis that it is incorrect for the professional. See review of change in "52nd Annual Convention," AIAJ 7 (April 1919): p.194.

[173] Executive Committee Minutes, December 1925, p. 20, AIA RG 510-3.

[174] Executive Committee Minutes, October 26, 1926, p. 6, AIA RG 510-3.

assured the convention delegates that the profession dominated construction, controlling 70% of all buildings over $5000. "Architects have become an economic necessity," he assured them.[175]

The Committee on Industrial Relations headed by Robert Kohn noted in its annual report in May of 1926 that the architect "had never been in a stronger position" and that "there is no new danger to his status by reason of modern development in building operations."[176] However, George Nimmons, a member of the Executive Committee and head of the Education Committee, noted his conviction that encroachments on the work "properly belonging to the architect are serious." The Executive Committee resolved to inform the membership of both views and to emphasize the necessity of "rendering complete and satisfactory service to the client if the architect is to hold a proper position under existing conditions in the building industry."[177]

In order to protect the architect's position, the AIA also undertook to advance his "public image", serving the professional by providing him with publicity and advertising services. These however, had to be handled in such a way that they did not appear to contradict the professional's aversion to self-promotion stated in the Canons of Ethics. Before the war AIA members had performed highly visible service on, for example, the McMillan Commission, work which, architects believed, had done much for their public image. Unfortunately, the exclusion of private architects from large governmental building by the Treasury Department since the repeal of the Tarsney Act in 1912 made work on visible public buildings inaccessible to architects throughout the first half of the 1920s.[178] To monitor federal building and to lobby for the greater involvement of private architects in these projects, the AIA established its Public Works Committee. Milton Medary, chair of the committee in 1923, pointed out that it was his committee's task to "advise" the government -- the Treasury Department, in particular -- on matters of design in the development of its buildings. This, Medary wrote, gave the means by which "an individual architect may render

[175] John Taylor Boyd, "58th Convention of the AIA," _AF_ 42 (May 1925): pp. 277-82.

[176] Executive Committee Minutes, May 1926, p. 8, AIA RG 510-3.

[177] Ibid. With surprising consistency the AIA still advises its members that the best way to retain clients in the face of competition from non-professionals is to "over-service" them.

[178] Saylor, pp. 62-65; Lois Craig et al., _The Federal Presence: Architecture, Politics and Symbolism in United States Government Building_ (Cambridge, MA, 1977), pp. 309-11; Saint, p.94. The exclusion of architects from Federal work continued until the passage of the Public Building Acts of 1926 and 1930.

public professional service without being accused of looking for a job."[179] In 1921, Henry Holsman also observed that public service was a means of drawing favorable public attention to the profession.[180] Medary, in particular, continued to endorse the idea of using governmental building programs as a way of popularizing the role of the architect. As AIA president in 1926 and 1927, he made it Institute policy to maintain a constant criticism of the Plan of Washington and its development, noting that "the architect is far less active in civic affairs than he should be, both for the good of the community and for his professional standing."[181]

The AIA mounted other more aggressive attempts to improve the public image of the architect. Its Committee on Publications and Public Information under the chairmanship of John van Pelt set about to encourage local chapters to seek greater visibility for architects in their regions and to inform the public about the service which the architect performed by stressing his "professional" character and his commitment to the public welfare. The committee pursued this goal through several media, proposing that chapters provide articles to local magazines and newspapers, sponsor exhibitions of chapter member's work and encourage their members to lecture publicly. The Committee also noted that reviews of buildings typically failed to mention the name of the architects responsible for the design. To correct this, van Pelt recommended that chapters supply newspapers with pertinent information about authorship and, when necessary to take out paid advertising to create, "a lever over newspapers to insist that architects names be included in all stories about buildings."[182]

In 1923, the Committee began the practice of soliciting articles from architects, planners, other professionals as well as journalists on architecture for publication in the "popular" press. Ralph Adams Cram contributed an article on "Church Architecture"; the planner Thomas Adams, head of the Commission on the Regional Plan for New York City, wrote on "How we Came to Plan Our City"; and Robert Benchley provided an article on the American Home entitled, "Just a

---

[179] Executive Committee Minutes, July 1923, p. 4, AIA RG 510-3.
[180] Henry Holsman, "Public Architectural Service," AIAJ 9 (January 1921): p. 21.
[181] "Institute Directors Move to Advance the Status of Architecture," AIAJ 16 (January 1928): p. 5.
[182] John van Pelt, "Public Information About Architecture," AIAJ 10 (December 1922): pp. 397-98. The Executive Committee endorsed the idea of advertising by chapters in 1922.

Love Nest."[183] The Committee oversaw a wide range of activities among the chapters which were

newsworthy and which the chapters used as publicity. Reports of chapter activities were printed in

the Journal in the hopes that they would inspire other chapters to engage in work which might stir

the public's interest. In December of 1922, the Committee reported for example that the

Baltimore Chapter published a series of articles in the Baltimore Evening Sun on the

"Development of Art"; the Nebraska Chapter furnished a series of lectures to the Omaha Business

Woman's League; and the Wisconsin Chapter had purchased full page advertisements in the

Milwaukee Sentinel outlining the advantages of "complete architectural service."[184] By 1925, the

work of the Committee had expanded to the extent that it hired a publicity agent to coordinate the

activities of the Institute and its chapters. James Grady, who was in charge of publicity for

Columbia University, was given an annual budget of six thousand dollars and directed to develop a

strategy for the advertising campaign that elevated the public image of the architect.[185]

The Committee on Publications and Public Information also maintained an active

publishing program which worked in conjunction with the AIA Press, the publisher of the Journal,

and the Committee on Education under George Nimmons. Its two most substantial projects were

the compilation in book form of Louis Sullivan's Autobiography of an Idea (1924) which originally

appeared in installments in the Journal and essays on the fine arts called The Significance of the

Fine Arts (1923) which featured articles by prominent architects such as Ralph Adams Cram and

Paul Cret.[186] Both books portrayed the architect as an interpreter of social and technological

forces, necessary to the formation of culture and, although neither depicted the professional as a

manager or technical expert applying his skill to an industrial problem, both stressed the rationality

of design and the conceptual compression of material conditions by the architect in the process of

---

[183] Executive Committee Minutes, November 8-9 1923, p. 2, AIA RG 510-3.

[184] van Pelt, "Public Information," p. 307. Articles appeared monthly.

[185] Executive Committee Minutes, December 1925, p. 3-5 and Dec. 1926, AIA RG 510-3; Saylor, p. 47. Grady was appointed editor-in-chief of the AIAJ after Whitaker left in 1927 and kept the position until the Journal folded in the same year. Grady stayed with the AIA until at least 1940.

[186] The AIA Press published Henry Adams' Chartres and Mont Saint Michel before the war at the request of Ralph Adams Cram.

forging a modern style.[187] As George Nimmons remarked, both books were intended, "as a

general handbook for the public among which it is hoped to stimulate a greater appreciation in the

fields of architecture."[188]

Beside the Committee on Publications, the AIA Committee on Education propagandized

the role of the architect. Picking up on themes elucidated in the Significance of the Fine Arts, the

Education Committee emphasized that the evolution of architectural styles were a cultural

imperative and historically unavoidable.[189] In 1925, the committee proposed a program for its

activities over the following years when Nimmons informed the Executive Committee that his

group wanted to encourage educational institutions to give honorary degrees to architects; that

they wanted to provide the medium for the Producer's Research Council to distribute lectures,

films and books on technical matters for use at Chapter meetings and conventions; and, that they

wanted to encourage schools to increase the number of courses in architecture in the general

education courses to the public. Nimmons also noted that insofar as an impediment to achieving

this goal had been the shortage of trained teachers for arts education at the college level, they had

resolved to increase the supply of art teachers and to create a curriculum for courses. Nimmons

and his fellow committee members also took it upon themselves to encourage the College

Examination Board to include questions about the fine arts in its entrance examinations in the

hopes that this would force high schools to offer courses.[190]

At the same time, the committee began to formulate an adult education course in the fine

arts, an effort for which they received a five thousand dollar Carnegie Foundation grant. With this

endowment, the AIA was able to organize courses in the instruction of art and art appreciation at

the Chicago Art Institute between 1925 and 1927. In the first year, ten colleges participated,

---

[187] Paul Cret, writing on "Modern Architecture," for example, writes that the circumstances of program, geographical conditions, social conditions, human relations, and technical processes are given expression through the design process. See Paul Cret, "Modern Architecture," in Cret et al., The Significance of the Fine Arts. (New York, 1923), pp. 183-243.

[188] "53rd Annual Convention," AIAJ 8 (June 1920): p. 224.

[189] Cret, "Modern Architecture," pp. 188-9. Cret asked his readers rhetorically if a "modern" architecture exists and replied, "A century that has built as vastly as the one we are studying has an architecture whatever the critics may say."

[190] Executive Committee Minutes, December 1925, p. 3-5, AIA RG 510-3.

sending faculty members for one month during the summer and agreeing to offer a full year course in the following fall on architecture, painting and sculpture in their normal curriculum. The committee paid travel expenses and provided a set of lantern slides and art books to each college out of its funds. One of the primary texts was the Significance of the Fine Arts.[191]

By 1924, William Faville, then the President of the AIA, could observe that the evolution of the Institute since World War I had been significant.

> [T]he American Institute of Architects...has become a compact and vigorous professional society....Its administrative, committee, and other activities as prescribed by the Convention, or by the Board of Directors, are effectively conducted. The influence of the Institute with the Press, the Public and the Governments of our cities, states and country is most gratifying, when one considers the smallness of our number and the slenderness of our financial resources.

Even if architects were not convinced by the rhetoric cultivated by the AIA that proclaimed the professional's "service to society," they could still accept the tasks which the AIA claimed for them, procuring "aesthetic, scientific and practical efficiency." To be sure, professional ethics had been twisted, conventional practices abandoned or fundamental principles of work transformed. But, the economic and political milieu made these changes necessary, a consequence of the Institute's efforts to defend and expand the terrain of professional practice. Each time the AIA was successful in instituting change without appearing to abandon its ethical canons or conventions of practice it was fortified. Seeking self-preservation over authenticity, the Institute gradually superseded its own pre-war ideology of exclusivity. By its presence the AIA caused these changes to be spread throughout the profession, setting the stage unilaterally for new design methodologies to emerge out of the dominant modes of production.

[191] This program was expanded in 1926 and 1927 and included similar summer courses at Harvard University also funded by the Carnegie Corporation. Executive Committee Minutes, November 30, 1927, p. 14, AIA RG 510-3.
[192] "The 57th Annual Convention," AIAJ 12 (June 1924): p. 275.

Chapter Three: Architectural Design and Building Production, 1917-1933

> During boom years architects, particularly in the larger offices, became imbued
> with the psychology of their clients. All the Hooverian dogmas of individualism,
> salesmanship, profit-making, were swallowed unquestionably. Architectural
> magazines were full of articles on the money-making side of the profession; the
> architect was often a promoter and a business man rather than a designer. As he
> became immersed in financial schemes and details, his professional position
> weakened; the architect was merely one of several cogs in the machine of
> corporate and individual profit chasing.[1]

Talbot Hamlin (1939)

In the 1920s, American architects began to carry out the reforms of their practices

recommended by the AIA's Post-War Committee: they sought out collaborations with other

"experts" in the management of building production and offered architectural design as a means of

procuring efficient building configurations that optimized space and minimized the cost of

construction. Seen within the context of the American construction industry, these efforts to

change architectural practice were consistent with the evolving modes of building production. By

the 1870s, industrialized building methods that had facilitated the development of the massive rail

network and buildings for industry began to appear in work of more architectural consequence

such as the highrise building. Together with the gradual infiltration of industrial products into

construction, the growing scale and complexity of buildings such as these demanded that the

architect coordinate his work with that of other participants in the construction process from the

contractor who managed work on the jobsite to the manufacturers of building materials. The

proliferation of large scale, privately financed speculative building enterprises also conveyed the

priority of maximization into the architectural design process and encouraged the development of

more productive building technologies as well as plan formations which optimized the enclosure of

usable space.

But while the emergence of industrialized building methods and the emphasis on close

management of the construction process were not unique to the 1920s, the effort made by the Post-

---

[1] Quoted in Charles and Mary Beard, America in Midpassage (New York, 1939), p. 773.

War Committee to model the canons of professional practice after the exigencies of building production marks a dramatic shift in the thinking of American architects. In contrast to the intellectual conventions of either the Chicago School personified, for example, by Louis Sullivan or of French academicism disseminated through the Ecole des Beaux-Arts which both held that there was a distinction between architecture and mere building, the post-war reforms demonstrated a narrower conception of architecture as a sub-category of building production. The architect's willingness in the twenties to coordinate his work with that of other building experts and to accept the criterion of efficiency in building production suggested that the professional was prepared to relinquish control over the material qualities of his buildings in exchange for a more secure position in the managerial "team" presiding over the construction industry.

Two factors conditioned architects to accept these conclusions. Gripped by what Talbot Hamlin called the "Hooverian dogma," architects believed that their ability to induce efficiency in the construction industry and to maximize invested capital were potential sources of social well-being. This perception of architectural design as a component of industrial management leading, as the Hooverian model suggested, to an industrial utopia, imbued architectural practice with a sense of social purpose and legitimized the architect's close attention to the productive machinery of the construction industry. At the same time, the growth of speculative capital and the development of new financial instruments with which to funnel money into real estate development fueled a dramatic rise in construction volume in the 1920s and established the profit motive as the primary reason for building. The demands of investors to maximize their profit expressed with increasing frequency through anonymous financial institutions merged with the program of industrial utopianism and produced a rigid standard of maximization of building production which architects embraced as the guiding principle of architectural design.

Building Production and Architectural Design before World War I

In his memoir published in 1928, the building contractor and architect William Starrett pointed to the 1870s as the period in which American construction technology first began to exhibit

the influences of industrial technology. Using the example of the Centennial Exposition which opened in Philadelphia in 1876, Starrett observed a new capacity for large-scale, fast-paced building enterprises (fig. 3.1). Revealing his special interests as a builder, Starrett took note not only of the engineering capacity which had facilitated the massive enclosure of space but of the construction techniques as well (fig. 3.2). Incorporating in its pavilions prefabricated elements which themselves had been mechanically transported and systematically installed by work crews performing specialized tasks, the Exposition prefigured, he concluded, the mode of large scale construction which would proliferate and on which American builders would elaborate throughout the following thirty years.[2]

Starrett called upon examples of large scale American construction projects undertaken around 1876 to support his claims that the Exposition was emblematic of the building production of the era. Great public works within American cities such as the Eads Bridge of Saint Louis (completed in 1874) or the Brooklyn Bridge (begun in 1879) testified to the ability of both engineers to conceive and a construction industry to produce structures of unprecedented dimensions. The building programs of American railroad companies conveyed the influence of new construction technologies into the realm of architecture with the building of their urban terminals such as Union Station in Saint Louis begun in 1892. In their monumental presence, these projects made demands on the capabilities of the engineer as well as the architect.

Aided by the same experts who had developed the engineering formulae with which to figure the structure of bridges and buildings for the transportation network, architects exploited the potential of industrialized construction methods in the development of highrise building and produced a variety of stylistic alternatives. Starrett, whose historical depiction of the growth of building technology culminated with the skyscraper, regarded this building type as the hallmark of the advancing capacity of the building industry. By 1913, less than forty years after the Exposition,

[2] William Starrett, Skyscrapers and the Men Who Build Them (New York, 1928), p.50. An earlier example of large and complex building projects in the United States is given by the construction of the inland water routes such as the Erie Canal built between 1817 and 1825. But these projects, though constructionally complex, relied less on industrial methods than on engineering. Rarely could this work be performed in constant and repetitive cycles. Daniel Shodeck, Landmarks in American Civil Engineering (Cambridge, MA, 1987), pp. 13-19.

Starrett, as head of Thompson-Starrett construction company, was himself involved in the building

of the Woolworth Tower in New York, a structure designed by Cass Gilbert which drew popular

acclaim and came to represent the apex of aesthetic and structural development of the tall building

(fig. 3.3).

Starrett also observed in the Philadelphia Exposition the promise of well-managed

building enterprises to increase the speed of construction. Following its example of coordinated

work in 1906, Thompson-Starrett completed in one year a complex of five buildings in reinforced

concrete for the Sears and Roebuck Company of Chicago designed by Nimmons and Fellows and

reputed to be the largest commercial retail facility in the world (one building of which contained

14,000,000 cubic feet).[3] In the same year, the architect Albert Kahn working together with Julius

Kahn's Trussed Concrete Steel Company and the Boston engineering and architectural firm of

Lockwood, Greene and Company completed in nine months a similar structure in Buffalo for the

George Pierce Automobile Company (manufacturers of the Pierce Arrow) (fig. 3.4).[4] Speedy

construction also occurred in non-industrial buildings where time was an important consideration.

Starrett's brother, Paul, himself a contractor and chronicler of the history of construction

technology, noted that in 1907 the Fuller Construction Company set new records for speed when it

finished in eleven months the National City Bank Building, a complex project designed by McKim

Mead & White which involved the preservation of an existing arcade and its incorporation into the

new bank facility (fig. 3.5).[5]

Portraying building production as a field of activity undifferentiated by program types or

structural method, the Starretts grouped together the buildings they examined as equal examples

of the development of American construction technology. But, the diverse programmatic

character of bridges, factories, train stations, and office buildings presented architects immersed in

the canons of their profession with a dilemma of interpretation. Whereas the Starretts perceived

an emerging building technology whose methodologies of organization and priorities of speed the

---

[3] Carl Condit, The Chicago School of Architecture (Chicago, 1964), p. 179.

[4] Grant Hildebrand, Designing for Industry (Cambridge, MA, 1974), p. 43.

[5] Paul Starrett, Changing the Skyline (New York, 1938), p. 139.

construction industry applied universally to the task of erecting different types of structures, the dominant conventions of architectural design as they emerged after 1910 insisted on a separation of buildings based on the nature of the activities they housed. As we have noted previously, architects embracing the methods endorsed by the Ecole des Beaux-Arts focused on distinctions in the "character" of the programs of the buildings they designed as a means of determining an appropriate stylistic response.[6] In their efforts to define programmatic character they drew on a canonic hierarchy which placed buildings containing, for example, institutions of cultural and political authority at the top and utilitarian structures such as factories at the bottom. Thus, rather than viewing, as did the Starretts, the technology of building production as an historical phenomenon evolving through time but uniform at any one moment and universally applicable to the tasks of construction, architects trained according to the academic pedagogy of the Ecole des Beaux-Arts insisted that regardless of the constructional system employed in their production, buildings varied from one another according to the activities they housed. In place of the unilateral evolution of construction methods identified by the Starretts in the new technologies and organizational devices that they and their fellow builders exploited, American architects perceived a line of historical development compartmentalized across the direction of its unfolding.

The mode of thinking that divided buildings according to the cultural value of their contents or purpose stood in conflict with the evolutionary view of building technology that made distinctions between construction methods -- and by extension between the buildings in which those methods were applied -- according to their relationship to the maturing building sciences. Carried to its extreme, this intellectual convention led American architects such as Charles Moore to reject the historical primacy of the growth of technology depicted by the Starretts and to claim instead the primacy of an historical continuum in which the cultural value of specific modes of human activity -- each associated with building programs -- remained constant. Thus, as we have already seen, Moore put off the claims made by a younger architect that modern building methods defined the language of contemporary architecture. "Design and construction in architecture are

---

[6] Donald Egbert, The Beaux-Arts Tradition in French Architecture (Princeton, NJ, 1980), pp. 121-38.

governed by tradition, imagination, artistic aptitude, and practical experience, more than by science," he had concluded in his exchange with the architect Harold Lawson.[7]

The ability to represent hierarchies of cultural value made architecture a powerful rhetorical medium. McKim's placement of a Corinthian colonnade above the pre-existing ionic order in his project for the National City Bank created an image of cultural relevance both because of its invocation of an established stylistic language and because of the preservation of an historical artifact in the building's fabric. Likewise, the Woolworth Building, whose program as a commercial office tower merely provided space for the carrying out of the administration of Woolworth's mercantile empire, achieved an urban monumentality which drew on the iconography of traditional architecture and fostered its reputation as the "Cathedral of Commerce." Through their appearance these buildings withdrew from their associations with what was perceived by Moore and others to be the mundane and utilitarian means of industrialized building methods.

The canonic separation of the art of architecture from the means of building also created a situation in which those buildings that showed the trace of industrialized construction methods endured the neglect of the profession. Toward the end of the 19th century, the critic Montgomery Schuyler -- for whom the great engineering works embodied in the modern suspension bridge and highrise office building monumentalized American culture -- felt compelled to describe these as productions which stood outside of the conventions of "architecture." Seeking a critical terminology with which to deal specifically with the achievements of Chicago architects and builders in their development of highrise office construction in the late 19th century, he wrote, "The successes have been won by an absolute loyalty to the conditions, and by the frank abandonment of every architectural convention that comes in conflict with them."[8] Although Schuyler did not intend by his comments to exclude these buildings from historical accounts of American architecture, his words point to a resistance within the professional discourse to design methodologies predicated on the optimization of productive methods.

---

[7] Charles Moore, "Training for the Practice of Architecture," AR 49 (January 1921): p. 58.

[8] Montgomery Schuyler, "A Critique of the Work of Adler and Sullivan," AR (December 1895) reprinted in Lewis Mumford, The Roots of Contemporary American Architecture (New York, 1952), p. 236.

In the first decades of the 1900s, the gradual demise of the Chicago School, whose

intellectual presentiments were more compatible with the technological determinism preached by

the Starretts, signaled the professional eclipse of architectural design methodologies which drew

their inspiration from new building technologies.[9] Architects who had committed themselves to a

design method that prioritized efficient building production geared to the demands of industry

carried out their work before World War I without professional recognition. Between 1908 and

1917, the New York architect, Grosvenor Atterbury, pursued his work on a system of prefabricated

concrete construction intended to reduce the costs of worker housing with little scrutiny from his

architectural peers (fig. 3.6).[10] Likewise, both the architect Charles Nimmons of Chicago, who

carried out his work on large building projects such as the Sears Roebuck facility working in close

collaboration with the builders and manufactures, and the Lockwood and Greene Company of

Boston which offered total design and construction services worked with relative anonymity within

the architectural profession before World War I even though their reputations among their

industrial clients were large. Even after World War I, Albert Kahn, the architect of many

industrial buildings for the newly emerging automobile industry, was passed over by a committee

of prominent architects for service on the American Battle Monuments Commission because his

work had been primarily commercial.[11]

The reluctance shown by architects to acknowledge the contributions of their peers to an

evolving technology of building production was a purposeful and necessary part of their

professional ideology in the first decades of the 1900s. The professional insistence on the "artistic"

nature of architecture and on the autonomy of architectural design from the technical and scientific

aspects of building production removed the architect from a domain of work that was competitive

with engineers and fostered the architect's passive attitude toward the development of its

technologies. Moreover, as Carl Condit has noted, the pace and scope of change in constructional

[9] On the demise of the Chicago School see Condit, Chicago School, chapter eleven.

[10] See Grosvenor Atterbury, "How to Get Low Cost Homes," in Proceedings of the Fifth National Conference on Housing, (Washington DC, 1916), cited in Christine Boyer, Dreaming the Rational City: The Myth of American Planning (Cambridge, MA, 1983).

[11] See Elisabeth Grossman, "Paul Phillipe Cret: Rationality and Imagery in American Architecture" (Ph.D. diss., Brown University, 1980), p. 171.

method in the twentieth century was tightly controlled by corporate and industrial institutions that

dominated this industrial sector.[12] Lending institutions, real estate investors, businesses in need of

office space and industries in need of factories -- each participating in the building process as

distant and impersonal corporate entities -- applied quantitative rather than qualitative standards

to their construction enterprises. Their collective agenda, that of maximizing the output of

building production to reduce the costs of construction, defined the criteria of selection by which

new building technologies were identified and cultivated. Insurance underwriters eager to limit

risk in their coverage of real estate pushed for the regulation of building practices and produced a

national building code in 1905 and a Life Safety Code in 1913 which further limited the range of

experimentation in new building technologies.[13] Architects withstood this institutional dominance

within the construction industry by proclaiming the autonomy of architectural design from the

forces of change operating on building technology.

In general, this scenario of institutional sponsorship and regulation of new building

technologies militated against bold innovations in structure or novel construction methods which

did not have immediate and tangible results in productivity or return on capital. For example, in

concrete construction which of all modes of building experienced the most dramatic increase of use

in the first decades of the twentieth century, the predominant criteria for its selection were not its

spanning capacities or the aesthetic features it facilitated but rather its intrinsic resistance to fire (a

character which offered safety and reduced insurance premiums) and the low cost of the materials

which made it possible to standardize form work and use constant beam and column sections

despite variations in loading.[14] Thus, there was little to distinguish the Ingalls Building, the first

highrise structure in reinforced concrete designed by the firm of Elzner and Anderson and built in

Cinncinati in 1903 by the Ferro-Concrete Construction Company, from highrise buildings framed

[12] Carl Condit, American Building Art: The 20th Century (New York, 1961), p. 3.

[13] Arch (December 1987): pp. 127-29.

[14] Arthur McEntee, "Recent Development in the Architectural Treatment of Concrete Industrial Buildings." Arch 43 (January 1921): pp. 18-21; T. Crane, "Choosing the Structural System and Material." AF 50 (April 1929): p.603-10; Condit, American Building Art, p. 3. Following WW I concrete would also be preferred because it permitted an alternative to steel fabrication which required a long lead time in the production of shop drawings and because it was frequently delayed by labor strikes at the mills.

in steel (fig. 3.7). Instead, the building material offered itself as an alternative to the more

conventional methods of steel framing because it produced some savings in time by allowing the

construction team to forego the production of extensive shop drawings required for the

manufacture of steel pieces and because Ferro-Concrete which held licenses on the patented

building system using steel reinforcing was intent on proving the competitiveness of the material.[15]

Building experts similarly used quantitative criteria both to rationalize and celebrate the

use of steel in highrise construction. In his autobiographical sketches, the English architect, Alfred

Bossom, who came to the United States in 1903 and developed a prosperous practice between 1908

and 1930 specializing in urban office buildings, explained how the unique characteristics of the

American system were the result of the technology of its metal frame wrapped with an enclosing

masonry wall (fig. 3.8). Bossom called special attention to the savings in time and material which

resulted from the systematic nature of this construction process and the interchangeability of its

pieces. Formed out of prefabricated parts, the cellular and repetitive steel frame, he claimed,

reduced the task of construction to mere assembly. And, insofar as the structure, its enclosing

walls, its mechanical, electrical, and plumbing systems were each distinct components, their

production could be carried out separately by crews whose work, while complex, was highly

specialized and largely repetitive. Yet despite Bossom's insistence on the revolutionary capacities

of this building system, he gauged its impact by increases in the output of building production and

made little reference to its influence on the form of buildings.[16]

Bossom, who would return to his native England in the 1930s, advocated the use of steel-

frame curtain-wall construction on the basis of the capacity for speed in the building process which

it unleashed. He noted, however, that it offered this potential without the necessity of new

machinery or engineering virtuosity. Instead, Americans had realized speed in steel frame

construction by dividing the process of assembly into discrete and specialized tasks and then seeing

to it that these were executed quickly. Bossom claimed, moreover, that building experts in the

United States and Canada had revolutionized construction technology by their development of a

---

[15] Shodeck, Civil Engineering, see sections on concrete construction.

[16] Alfred Bossom, Building to the Skies (London, 1934), p. 72.

new order of management. The introduction of "Time and Progress Charts" around 1910, he suggested, had improved the efficiency of the architect and builder by setting time limits to their work based both on the complexity of their tasks and on the critical relationships which their work had with that of other experts. Thus, the chart portrayed the relationship in time between the work components that comprised the building process.[17] Inspired by the growing literature of industrial management, this coordination of tasks held out great promise for the reduction of time in collective efforts. Even the venerable firm of McKim, Mead & White which confronted tight constraints on the scheduling of its work for the National City Bank had to submit to such regulation. In response to a special request made by the contractor, William Mead redistributed his staff and scheduled their work according to a time chart devised by the contractor to ensure that their drawings were produced in sequence with the construction.[18]

These external controls on architectural work violated the architect's aspiration for professional autonomy. Despite the architects' efforts to construct a professional ideology that resisted the intrusion of values by which building technology had been advanced, the coordination of their work with other of the activities grouped within the process of building production threatened to confine architectural design. As their work was absorbed into a productive process controlled by distant managers unconcerned with the material and qualitative aspects of its products, architects lost not only their autonomy but also their control over the object of their design effort. The conditions militating against the authority of 'architectural' criteria in building worsened as the emphasis of large scale building production shifted more toward profit. Unable to maintain their professional distance and unwilling to confront building production as a field of professional scrutiny, architects who accepted the tasks of designing commercial structures were forced to accommodate those aspects of the building form determined by the exigencies of production or the conditions of investment.

A telling comparison can be drawn between several prominent buildings completed in the first decades of the 1900s. In 1908, construction was completed on the Singer Company's New

[17] Bossom, Building to the Skies, p. 119.

[18] P. Starrett, Skyline, p. 139.

York headquarters following the designs of the prolific architect, Ernest Flagg (fig. 3.9). A long-standing critic of urban densification and of its negative impact on the dramatic aesthetic of the soaring urban highrise which was all to often swallowed in a rising skyline, Flagg was able to convince his corporate patron of the value of restricting his building to a portion of its site in order to preserve its isolation as a tower. Flagg, whose professional independence was sustained by his family's connections with wealthy and politically powerful patrons, made his case, as Mardges Bacon has shown, for the aesthetic parameters of this urban vision. His arguments were successful because of his client's desire to forge a powerful symbol for itself, a goal whose importance pre-empted the economic criteria which might have called for a more effective occupation of the urban site.[19] Similarly, Frank Woolworth approved the slender profile of his urban tower, the Woolworth Building, in order to maintain its soaring appearance, consciously forfeiting its commercial viability, as the Fuller executive, Louis Horowitz, has stated, for its monumental presence.[20]

In the context of these two examples, Horowitz offered the Equitable Building, completed by the Thompson-Starrett Construction Company in New York City seven years after Flagg's tower and two years after the completion of the Woolworth Building, as an example of a building whose form derived from a different set of expectations (fig. 3.10).[21] Designed by the Chicago firm of Graham, Anderson, Probst and White for a small consortium of investors headed by the gunpowder magnate Coleman DuPont, the building contained sixteen fewer stories than the Woolworth tower yet enclosed more than twice the rentable floor area.[22] In fact, the building achieved the highest ratio of total floor space to lot size in New York and disrupted the local real estate market as a consequence of the magnitude of the new square footage it introduced. Following the criteria of its owners, the building succeeded in maximizing the potential value of urban real estate as no other building had ever done before. In contrast to the efforts of Flagg and

[19] See Mardges Bacon, Ernest Flagg: Beaux-Arts Architect and Urban Reformer (Cambridge, MA, 1985).
[20] Louis Horowitz with Boyden Sparkes, The Towers of New York (New York, 1937), sections on Woolworth Tower.
[21] Horowitz and Sparkes, Towers of New York, p. 102.
[22] 1,250,000 sq. ft. versus 550,000 sq. ft. in the Woolworth Building. Parker Chase, New York, 1932: The Wonder City (New York, 1932), pp. 177,189. The building remained the most valuable office building in the city based on its assessment until 1931, a reflection of both its size and the relentless drive for the expansion of invested capital in urban real estate.

Gilbert to preserve a vertical presence of the tall office building (regardless of the loss of potential floor space), the Equitable Building, with its simple profile rising directly from the limits of its site, emerged out of a design process which was directed by the logic of production applied to the task of maximizing the returns on capital.

As the size of buildings such as the Equitable building increased throughout the first decades of the 20th century, they demanded greater amounts of capital for their erection and more diverse expertise for the successful formulation of their design and its execution. Pressured by an increasingly anonymous mass of investors to procure profits and compelled to collaborate with other experts in the design of larger building enterprises, the scenario of abandonment by architects of the autonomous strategies of design became more common. In the 1900s, American architects participated with little dissent in a system of building production geared to fabrication of increasingly similar and reproducible structures.

Building Production During World War I

The agenda of maximization in building production assumed a dynamic presence in the professional architectural discourse during World War I. As we have previously noted, the war mobilization engineered by the Wilson administration in 1917 and 1918 diverted materials away from non-essential construction activities toward war-related production. At the same time, however, the government monitored the building needs of vital industries and released materials, capital, and labor for those projects it deemed necessary to industrial productivity. Gradually, as their involvement in building production increased, Wilson's war-time administrators instituted reforms in the construction industry that were modeled generally on the program of centralized planning and rigorous management which they applied to other sectors of American industry. The incorporation of building production into the network of industries whose productive capacity facilitated the allied victory infused these managerial reforms with a social relevance that inspired the professional architect.

Wilson's early mobilization plans had not anticipated the scale of the building efforts that

his administration was ultimately forced to undertake. His war boards had initially placed a high

priority on maintaining the size of the industrial infrastructure. Thus, they endeavored to avoid

new construction as a strategy of boosting production. Instead, they maintained a program for

improving industrial productivity which emphasized better management of existing industrial

resources.[23] To that end, they began their work by bringing together industrial managers, labor

leaders, transportation executives, and producers of raw materials and insisting on the formulation

of industry-wide strategies for the standardization of production methods, the coordination of

supply and distribution routes and the regulation of labor/management disputes. Invoking the

broad jurisdictional authority granted them by the President, they examined the machinery and

methods of industrial production and planned for their most efficient operation.

But in several areas of industry even large scale planning was not sufficient to generate

adequate levels of production from existing facilities or to handle the quantity of goods and

materials pushed through existing distribution networks. In Brooklyn, the U.S. Army engaged

Cass Gilbert to design their tremendous Supply Base which was constructed in reinforced concrete

and accommodated both their freight and storage facilities (fig. 3.11). As we discussed in the

previous chapter, the government also financed the renovation and construction of factories for the

production of armaments and shipbuilding, entering in as a financial partner with private

industry.[24]

Shipbuilding offers a good example of the government's methods. Fearing that the

unsubsidized American Merchant Marine was not sufficiently well-equipped to maintain supply

routes across the North Atlantic, Wilson created the Emergency Fleet Corporation in 1917 to

oversee the fabrication of new steamers. Confronted by the small capacity of the American

---

[23] Increases in productivity did not, by and large, come as a result of increases in the physical size of industry but rather through the improved management of its operation. See E.B. Alderfer and H.E. Michl, Economics of American Industry (New York, 1950), pp. 654-5; See also Paul Mazur, American Prosperity (New York, 1928).

[24] See U.S. Deptartment of Labor, Report of the United States Housing Corporation, Vols. 1 & 2 (Washington DC, 1919); on the Emergency Fleet Housing Corporation projects see U.S. Shipping Board, Emergency Fleet Corporation, Housing the Shipbuilder (Philadelphia, PA, 1920) and U.S. Shipping Board, Emergency Fleet Corporation, Types of Housing for the Shipbuilder (Philadelphia, PA, 1919); see also Richard Candee, Atlantic Heights: A World War I Shipbuilder's Community (Portsmouth, NH, 1985).

shipbuilding industry, the Corporation began its efforts by subsidizing the construction of new

privately owned shipyards, capitalizing their manufacturing activities then purchasing the

completed ships which it leased to private shipping companies. The renovations of the facilities of

the Atlantic Corporation located outside of Portsmouth, New Hampshire, for instance, were

financed by Emergency Fleet. The designs of the expanded facilities included new drydocks and an

enlarged workshop and were developed by Lockwood, Greene and Company. Although owned by

a private consortium of Boston industrialists the construction of the yard was supervised by the

Emergency Fleet staff which insisted on simple, easily constructed buildings closely adapted to the

production of ships whose designs were themselves standardized and simplified for efficient

production (figs. 3.12, 13).[25]

The Wilson administration did not limit itself to the building of factory buildings and

drydocks, however. For example, the expanded operations of the shipbuilding and armaments

industries demanded by the government created a need for an enlarged work force which

frequently surpassed in number the pool of qualified laborers already living within the vicinity. In

some cases, especially when new plants were located near major metropolitan areas, Wilson's

administrators resolved the dilemma by expanding the volume of the commuter transportation

system. But in other cases where factories were in areas with low populations such as ammunitions

factories which required isolated locations limiting the potential loss from accidental explosions,

the inadequacy of the local labor pool was unresolvable without the provision of new housing. In

1918, the Federal Government passed legislation supporting the construction of worker housing to

augment its program in industrial building. On March 1, Congress authorized the United States

Shipping Board to spend up to $50,000,000 to provide housing for workers in the shipbuilding

industry. On June 18 of that year, President Wilson delegated the authority to the Secretary of

Labor to spend up to $60,000,000 to provide housing and/or transportation for industrial workers

engaged in arsenals and navy yards as well as other industries essential to the national defense.[26]

---

[25] See Candee, Atlantic Heights.

[26] U.S. Dept. of Labor, Report, vol. 1, p.16-8; see also Mel Scott, American City Planning since 1890 (Berkeley, CA, 1971), p. 171-2. The authorized sum for the U.S. Shipping Board was later increased to $75,000,000; the authorized sum for the Labor Department housing program was later increased to $100,000,000.

These agencies, whose ranks included architects prominent in the AIA including

Frederick Ackerman and the later presidents of the AIA, Robert Kohn and D. Everett Waid,

organized their work activities on the model provided by Wilson's war boards.[27] Internally, they

combined the expertise of a wide range of professions, from engineering and landscape planning to

architecture. Externally, they coordinated their work with that of other government agencies

involved in construction. For example, they adopted the materials standards used by the Army,

Navy and Marine Corps as well as the Panama Canal Commission, the Treasury Department

(which oversaw the Office of the Federal Architect), and the Railway Administration.[28] In

addition, the Department of Labor's United States Housing Corporation, headed by Frederick

Olmsted, created their own internal procedural standards. The architectural staffs of the federal

housing offices also established coordinated working methods that brought order to the diverse

tasks of analysis, design, and construction that they and their consultants undertook. These

guidelines set out the specific responsibilities of the private architects hired to produce the designs

of the housing and coordinated the architect's work with that of the engineers, landscape architects,

and "planners" with whom they collaborated. Thus, the multi-disciplinary approach prevailed.[29]

The housing boards quickly identified standardization as an important means of saving

time and money in the construction of housing. On the one hand, the materials standards which

they documented in the agency manuals and made available to private consultants with whom they

worked, established the parameters for simplified ordering procedures and permitted the

purchasing agents representing the combined war-time housing authorities to bargain for price

reductions on the basis of the volume of their orders. On the other hand, by judicious selection

and careful regulation of the materials used the housing boards could defend their building

programs against delays caused by war-provoked shortages. The houses were, therefore, framed in

---

[27] On architects participating in these agencies see "The Housing Division of the Emergency Fleet
Corporation During the War," AIAJ 7 (January 1919): p. 41; and "The United States Housing Corporation of the
Department of Labor During the War," AIAJ 7 (February 1919): p.59.

[28] U.S. Dept. of Labor, Report vol. 2, p. 50.

[29] All design teams worked under a supervising architect or planner employed by the Emergency Fleet and
consisted of an architect, civil engineer and a town planner or landscape architect. U.S. Dept. of Labor, Report, vol. 1, pp.
16-8.

wood, a material readily available and which did not involve complex production methods. They determined that heating in the homes they built should be provided by furnaces delivering hot air thereby foregoing the requirements for extensive metal piping required by hot water systems. Due to the short supply of lead and zinc oxide they precluded the use of white paint as well as chrome yellow and green which were in demand as camouflage colors. The scarcity of sheet metal also resulted in restrictions on the form of roofs: gutters and downspouts were formed in wood and roof profiles were kept simple in order to avoid complex intersections.[30]

Often executed in groups to provide housing for large communities of laborers and their families, the designs of these houses were also frequently standardized (figs. 3.14, 15). Although the houses varied in height from one to two stories and ranged in occupancy from single family to multiple family dwellings, their volumetric configurations were frequently similar, consisting of simple box-like forms surmounted by pitched roofs.[31] In plan, the buildings were laid out sparely, often without hallways, and were standardized within each community according to type. The architects provided for variations in appearance by deftly "flipping" plans and changing elements such as porches as the designs for the housing at Erie, Pennsylvania by Albert Spahr indicates (figs. 3.16, 17).[32]

Among the most extraordinary responses to the demand for standardization was that of Graham, Anderson, Probst and White, architects of the DuPont's Equitable Building, for the Ordnance Department's town of Nitro, West Virginia. Located for safety reasons far from populated areas, the town housed the staff of a new munitions factory. To complete the construction tasks, the contractor, Thompson-Starrett, could not rely on local work crews and used instead a system of prefabricated construction (figs. 3.18, 19, 20, 21).[33] So mobilized, Thompson-

[30] U.S. Dept. of Labor, Report, vol. 2, p. 67.

[31] Within the literature produced by the U.S. Housing Corporation several technical arguments were advanced in favor of pitched over flat roofs including the scarcity of flashing material and the complexity of appropriate waterproofing. But the same documents also suggested that the pitched roof was desirable because of its scale and its association with housing for English garden cities. Charles Whitaker et al, The Housing Problem in War and Peace (Washington DC, 1918); see also Richard Dana, "The Best House for the Small Wage Earner," in Southern Pine Association, Houses for Workmen (New Orleans, 1919), pp. 88-93.

[32] U.S. Dept. of Labor, Report, vol. 2, p. 69.

[33] Louis Horowitz, President of Thompson-Starrett Construction Company, was a personal friend of Coleman DuPont for whom he built the Equitable Building. Horowitz and Sparkes, sections on Woolworth Tower.

Starrett produced the facility in several months, demonstrating the potential of coordinated and efficiently managed building production.

Although both architects and architectural firms did participate in the mobilization of the construction industry for these war time activities, they were, as the AIA President, Thomas Kimball, would later reveal, greatly perturbed by their failure to lead the effort to reform production methods.[34] The AIA's Post-War Committee which invoked the model of the war-time housing agencies when it called for "intimate organized cooperation of all factors in building production" lamented the architect's persistent failure to implement strategies of coordination. "The modern tendency of business, accented by the experience of the war," the Committee reported in its "Preliminary Outline" of 1919,

> ...is to deal with larger organizations with one responsible head rather than with the several contributing factors that go to make up an organization to produce a material result....The war has brought the whole world face to face with a situation which demands that production be increased and that resources and facilities be developed to an extent far exceeding pre-war volume. The architect is said to have done nothing to coordinate his work with the movement for efficiency in production.[35]

In this text, the Post-War Committee went on to note that, in contrast to the architect, the contractor and the engineer had already proven their abilities to lead the industry. There was good reason to make this observation. As had some architects, executives from construction companies took positions in Washington D.C. within Wilson's war time administration. But their roles seemed to have been of more consequence than those played by architects who had answered the call to design housing or occasionally -- as in the case of Albert Kahn -- factories and other buildings for war-related industry. William Starrett, who retained his position as an executive with Thompson-Starrett, assumed the rank of Colonel in the Army Corps of Engineers. He was subsequently assigned Chairman of the Emergency Construction Section of the War Industries Board and placed in charge of all Army construction in the United States during the War.[36] His brother, Paul Starrett, became a civilian employee of the Emergency Fleet Corporation.[37] Millard

---

[34] See "President's Address - 53rd Annual Convention of the Institute," AIAJ 8 (June 1920): pp.220-22.

[35] "Post-War Committee - Preliminary Outline of Programme." AIAJ 7 (January 1919): pp. 25-28.

[36] Chase, p. 111.

[37] P. Starrett, Skyline, pp. 195-200.

Shroder, a partner after the war in Shroder Koppel Construction, became a civilian employee of the Ordnance Department, responsible for plant construction.

The companies of these men and of their fellow builders also received contracts for factories, depots, warehouses, shipyards, and housing from the government and its agencies. We have already mentioned Thompson-Starrett's work for the Ordnance Department. Private construction companies built towns for the U.S. Shipping Board and the Emergency Fleet Corporation (figs. 3.22, 23). Fuller Construction, based in New York City and Chicago, built a shipyard and housing at Cape Fear River, North Carolina. The firm's work was so successful that they were also engaged by the Emergency Fleet Corporation to take over the yard and produce ships. By war's end Fuller had completed over $22,000,000 worth of construction in both buildings and boats.[38]

The example of Fuller's boat building activities demonstrates how broadly applicable were the skills of these construction managers. Their experience at organizing men and materials for production suggested that contractors and "construction engineers" were capable of producing other war essentials. For example, Louis Horowitz, an executive in Thompson-Starrett, became a civilian employee of the Red Cross Relief program supervising food distribution. He was later assigned by the Army to coordinate tank production. His responsibilities included the coordination of production activities and the institution of standardization among the consortia of manufacturers assembling the vehicles.[39]

The significance of these experiences is twofold. First, the participation of architects and contractors in the war-effort accustomed them to a new scale of work and a new emphasis on the speed of production unleashed by careful planning. Second, the tasks performed by the contractors, in particular, reinforced the notion that the construction industry was little different from other industries. The expertise of construction managers suited them equally well for management roles in the production of ammunition, boats, tanks or buildings. As a corollary, the

---

[38] Ibid.

[39] Horowitz and Sparkes.

same priorities of speed, increased productivity, standardization, and industrial coordination which boosted war-time production could apply equally well to the production of buildings.

At war's end, the Wilson administration oversaw the disassembly of its coordinated governmental planning units and dismissed the individuals who had served as administrators. In anticipation of the credo of the subsequent administrations of Warren Harding and Calvin Coolidge which proposed a "Return to Normalcy" predicated on the a resurgence of private enterprise, the U.S. Congress sought to eliminate from the government any activities that competed with the activities of private companies. The vehemence of the congressional attacks on government sponsored housing is nowhere better shown than in the mandated dismantling of the federal housing programs. Congress ordered the sale of the government-owned and operated buildings of the Labor Department's Housing Corporation. To generate enthusiasm among workers to purchase its housing and kindle interest in home ownership, the department initiated its "Own Your Own Home" program in 1919. Subsequently, the Emergency Fleet Corporation sold 1450 ships, whose construction had totaled over two billion dollars, and the 16,000 homes it had undertaken since the war began.[40]

The rapid termination of the federal building programs after the armistice derailed the efforts of those architects committed to forging a publicly subsidized building industry in the United States and demonstrated the political support for profit-motivated private enterprise. But, while the consensus for publicly financed building evaporated, the popular fascination for large scale "scientifically" devised industrial management was unabated. Drawing on this sentiment, the political philosophies which emerged after the war portrayed an industrial utopia in which industrial planning yielded higher levels of productivity leading to reduced production costs, higher wages, better distribution, and greater access of Americans to the fruits of their labors.

Gripped by the belief in the efficacy of industrial management as it was applied during the war, professional ideologists such as those who crafted the proposals advanced by the AIA's Post-War Committee sought a new role for architects in a construction industry driven by profit. In an

---

[40] Alderfer and Michl, pp.140-1; Graham S. Wyatt, "Home in America: Early Alternatives to the Single-Family House," in Precis: p. 40; Edith Elmer Wood, Recent Trends in American Housing (New York, 1931), p. 81.

open letter to Senator William Calder, Chairman of the Special Committee on Reconstruction and Production published in the AIA Journal in 1920, the architect John Bright discussed the future evolution of the building industry. Noting the importance of construction-related jobs to the reconstruction efforts, he asserted that he and his fellow architects were prepared to assume a leadership role in the reformation of the building industry. Couching his arguments in the rhetoric of industrial utopianism which conflated the goals of profit-making with social well-being, Bright argued that this work would be dominated by two criteria. "The two things to be studied," he wrote,

> ...are first the direction given to modern life by the theory of business profit; and second, a reorganization of the construction industry by which it may better serve its own personnel and the public at large.[41]

Inspired by the promise of both economic and social rewards, Bright foresaw reconstruction as a period during which the emphasis of building production in the United States would shift irrevocably away from its products to its capacity as an industry to expand, increase its productivity, and create profit.

The Post-War Milieu: Planning for Efficiency

The successes of Wilson's administration in organizing American industry during World War I produced a euphoria for its methods among American industrial leaders which persisted throughout the 1920s. Inspired by the reports of tremendous gains in productivity during the war, American managers showed renewed interest in the organizational methods of Taylorism which they attempted to institute inside their plants.[42] To coordinate their work with that of managers in other related industrial areas, they sought out mechanisms such as the trade association which enabled them to implement procedural and material standards.

More diffuse in its management structure than other "industries," building construction was far more resistant to these efforts to establish encompassing production standards than was

---

[41] "The Building Industry in the United States," AIAJ 8 (August 1920): pp. 307-10.

[42] Alderfer and Michl, p. 654; see also David Noble, American By Design: Science, Technology and the Rise of Corporate Capitalism (New York, 1977), pp. 257-320 on the changing pattern of Taylorism in the 1920s.

176

manufacturing, for example. Yet, its importance as both a source of work and revenue as well as the producer of an essential "commodity" drew the persistent attention of economic and industrial reformers. Most prominent among the reconstruction pundits fixated on the success of the construction industry after the war was Herbert Hoover. Even before his appointment in the Harding administration, Hoover's report, "Waste in Industry" presented to the Federated American Engineering Societies in 1920, described American building production as a vital industrial sector in need of comprehensive management.[43] As head of the Commerce Department after 1921, Hoover carried out the directives set forth in his report and attempted to foster "voluntary cooperation" among the representatives of contractors, labor unions, materials manufacturers, and the 'experts' such as architects and engineers who made their livelihood through building. In 1921, the Department inaugurated its Division of Simplified Practices which produced 86 major recommendations on industrial practices. In the eight years of Hoover's tenure as its director, the Department sponsored over 1200 conferences focused on the elimination of waste. Together with numerous Trade Associations which the Department helped to establish, its Bureau of Standards amassed information about the quality, size, availability, and performance characteristics of materials and equipment used in building. The Department also oversaw the development of new uniform dimensions used in mass-produced building components and standard methods of manufacturing and ordering that had first been promoted by the governmental purchasing offices during the war.[44]

As with other reformers of industrial management, Hoover justified his efforts to induce greater efficiency in industry on the basis that they would unleash its potential as a social force. In 1923, he appointed a special committee of business and labor representatives to investigate ways in which construction could be carried on throughout the year. Hoover later proclaimed in his Memoirs that the outcome of this work was an "annually enlarged building program...handled by the extension of the building season into winter months." This, he concluded, "has had a stabilizing

[43] See Edwin Layton, The Revolt of the Engineers (Cleveland, 1971), pp. 193-5; and Gary Dean Best, The Politics of American Individualism: Herbert Hoover in Transition, 1918-1921 (Westport, CT, 1975), pp. 159-68.
[44] Joan Hoff Wilson, Herbert Hoover: The Forgotten Progressive (Boston, 1975), p.110.

effect upon prices." But, he also insisted that the cycle of economic growth that these methods unleashed went further and created more jobs, higher profits, and better wages. Thus, Hoover advanced the notion that his focus on the productivity of industrial machinery produced social benefits as well.[45]

Architects expressed a similar commitment to the movement for industrial efficiency and began collectively to reassess their work according to its priorities in the wake of the war. Describing buildings as vital components of the industrial machinery, architects affirmed their ability both to render building production more efficient and to enhance the utility of buildings to the industrial activities they contained.[46] In an article entitled, "Industrial Buildings, Their Great Architectural Opportunities and an Appeal to the Architects to Help the American Industries Whose Buildings They Have Neglected in the Past," published in American Architect in 1926, George Nimmons declared that the time had come when his fellow professionals could openly commit themselves to the tasks of producing buildings for industry. Their contribution, he proclaimed, would be manifest in their ability to use their skills as designers to produce cheaper buildings which facilitated and enhanced vital industrial activities.[47]

Nimmons went on to insist that this agenda did not merely serve utilitarian ends but fulfilled a social need as well. The efficiencies in building production and in the performance of buildings for industry that resulted from thoughtful design reduced, he claimed, the cost of manufactured products and made them more accessible to Americans.[48] Drawing on the strong protectionist sentiments cultivated by American industrialists in the early 1920s, he also noted that these savings would increase the competitiveness of American goods against the threat of foreign commodities produced with cheap labor working under conditions of economic depression.

---

[45] Herbert Hoover, The Cabinet and the Presidency, 1920-1933, vol. II, The Memoirs of Herbert Hoover (New York, 1951), p.68. On winter construction, see also Condit, Chicago School, p.27. Condit notes how members of the construction industry had attempted to resolve the dilemmas of seasonal stoppages since the 1880's when the first efforts had been made to increase winter construction with electric light, treated mortars and heating.

[46] See for example Ely Jacques Kahn, "The Architecture of Industrial Buildings," AF 51 (September 1929): pp. 273ff.; and Moritz Kahn, "The Planning of Industrial Buildings," AF 51 (September 1929): pp. 265ff.

[47] George Nimmons, "Industrial Buildings, Their Great Architectural Opportunities and an Appeal to the Architects to Help the American Industries Whose Buildings They Have Neglected in the Past," AA 129 (5 January 1926): pp. 15-27.

[48] Ibid.

Nimmons, whose designs for the shipping centers of the retailer, Sears and Roebuck, were simply constructed in reinforced concrete and rationally laid out according to the patterns of work they contained, delivered a message to American architects extolling the virtues of "rational" design that was inexpensive to build and accommodated the activities it contained (figs. 3.24, 25, 26, 27). His articles, the historian George Edgell has suggested, established the industrial building as a type worthy of the attention of architects and introduced a model of criticism which prioritized efficient plan forms that would endure throughout the 1920s.[49]

In assuming a professional stance as societal benefactors, architects also looked beyond factories and mail-order houses as buildings in which to apply strategies for procuring efficiency. Through special standing committees of the AIA, its members examined the planning and construction of housing and schools, both building types whose efficient production benefited large sectors of the American public. Architects also argued that the highrise office building serving the needs of industrial administration contributed to social well-being by facilitating effective communication among managers. The architect Harvey Wiley Corbett who began his career designing industrial buildings emerged in the 1920s as a proponent of the highrise office building, professing its value as a "machine" of integrated management which delivered its social dividend in the form of higher productivity and lower production costs for the industries whose managerial and administrative departments it housed (fig. 3.28).[50] One of Corbett's earliest office buildings, Bush Tower in New York City which he designed for the owner of a large port facility in Brooklyn, embodied this role of the commercial building (fig. 3.29). Located in mid-town Manhattan, the

[49] George Edgell, The American Architecture Today (New York, 1928), pp. 287-88. See also George Nimmons, "Modern Industrial Buildings," AR 44 (November 1918): pp. 414-21; (December 1918): pp. 533-49; AR 45 (January 1919): pp. 27-43; (February 1919): pp. 148-88; (March 1919): pp. 262-82; (April 1919): pp. 343-55; (May 1919): pp. 450-70; (June 1919): pp. 506-25.

[50] See for example, Harvey Wiley Corbett, "Economic Height of Buildings: The Skyscraper Attacked and Defended." in U.S. Chamber of Commerce, Report of the Annual Meeting (Washington DC, 1927); and Corbett, "America's Great Gift to Architecture," NYT, 18 March 1928, pp. 4-5. When Corbett addressed the United States Chamber of Commerce annual meeting in 1927, he was introduced by John Ihlder as, "One of the leading advocates of the skyscraper....He is a man of international reputation, the architect of some of the most successful large office buildings in New York." U.S. Chamber of Commerce, Annual Meeting, p. 10. Portions of Corbett's address appeared in the NYT, 6 October 1929; in Thomas Adams and Edward Bennett, Regional Survey of New York, v.VI: Buildings: Their Uses and the Spaces About Them (New York, 1931), p. 106; and in W.C. Clark and J.L. Kingston, The Skyscraper: A Study in the Economic Height of Modern Office Buildings (New York, 1930), pp.79-80.

tower allowed Bush to consolidate his administrative staff and to centralize the sales offices of the

companies which did business through his Bush Terminal facilities.

Other architects beside Nimmons and Corbett called upon the rhetorical imagery of social

well-being produced by efficient building production as a means of legitimizing their new attention

to efficient design and efficient management of construction. Alfred Bossom, for example, wrote

of the innovations in construction technique whose development architects had cultivated. Bossom

cited the work of the architect, Fiske Kimball, on the development of caissons for the foundation of

highrise construction in the same constellation of technical innovations which had unleashed

highrise construction as Roebling's improvements to wire rope, Carnegie's development of

Bessemer steel, Edison's light bulb, and Bell's telephone. He then concluded that these efforts had

both changed buildings in their size and performance and revolutionized the work involved in their

construction. "The work of the pioneers," he wrote,

> ...has brought quicker and cheaper results without requiring operatives to work
> harder and longer and at the same time permitting them to earn higher wages on
> account of better organization and at the same time yielding greater dividends to
> the owner's concerned.[51]

But the arguments proposing that motives of social "service" inspired the architect to seek

out new technologies or to strive for more efficient building methods concealed, as the English

critic, Arthur Penty, noted in the pages of the AIA Journal, the economic forces simultaneously at

work in the post-war construction industry.[52] In 1924, following four years of little building activity,

Penty observed the increasing momentum and escalation of new construction in the United States

produced by a fluidity in domestic capital markets.[53] Caused by an unwillingness among managers

to make large capital investments in industry and magnified in its impact by a de-regulation of

lending institutions financing real estate development, this condition resulted in an explosion of

[51] Bossom, Building to the Skies, p. 95-6.

[52] Arthur Penty, "Architecture in the United States," AIAJ 12 (November 1924): pp. 473-78.

[53] On lending policies during the 1920s see Miles Colean, American Housing: Problems and Prospects (New York, 1947). Historians have argued that this excess capital resulted from the combination of the repayment of European war-debts and a reluctance among industrial leaders to make capital improvements in American industry during the two or three years of economic sluggishness in the wake of demobilization.

construction activity in the mid-1920s. As Thomas Holden reported to the architectural

community in Architectural Record in 1926,

> There has not only been an unprecedented volume of available credit but general
> business has advanced rather slowly and has not made very large demands for
> money and so drawn it away from building enterprises as a result. Thus, there
> was an extended period of very low interest rates with money available for
> building enterprises in practically unlimited amounts and facilities for placing
> loans on building enterprises extended and improved beyond anything we have
> ever had before. The influence of easy money conditions has probably counted
> more strongly than any other factor in making the record breaking construction
> of 1925.[54]

Awash in investment capital that sustained their work, participants in the building industry were

forced to acknowledge the determinism of the profit motive. In this context, the rhetoric of

"maximization" engulfed the social arguments made on behalf of efficient and rational design.

The construction industry was well poised to receive the massive influx of capital that

Holden described. The efforts to reform building production initiated during the war and carried

out by Hoover emboldened investors whose capital flowed into investment real estate and fueled

this growth. Moreover, the gradual implementation of zoning in the 1920s, which granted the right

to government to legislate and police the use, volume, and height of buildings within territorial

districts or "zones", helped to stabilize real estate markets. Its constitutionality determined in 1922,

zoning encouraged a more rational disposition of buildings and the activities they housed.[55] As we

will see in the following chapter, zoning also stabilized the markets for the land and buildings

whose form and use it controlled by preventing unanticipated juxtapositions of incompatible

activities such as factories and housing and setting limits to the sizes of buildings.[56]

The growth in construction volume did not occur unilaterally across a wide spectrum of

building types but was instead confined to those areas of building which offered investors the best

opportunities for profit. Writing for the F.W. Dodge Corporation, Thomas Holden reported that

for the period between 1919 and 1926 residential and commercial building showed the most

dramatic gains and exceeded in total volume all other areas including institutional and industrial

---

[54] Thomas Holden, "The Building Prospect for 1926." AR 59 (January 1926): pp. 83-5.

[55] Gordon Whitnall, "History of Zoning," in Annals of the American Academy of Political and Social Science, 155:II (May 1931): pp. 1-14. See also Scott, sections on zoning; Boyer, pp. 139-70.

[56] Boyer, p. 154-59.

building.[57] Taking into consideration that architects were responsible for a larger percentage of commercial than residential construction, it is certain that commercial building represented the single largest growth area for architects' work. In financial terms, commercial architecture was significant: between 1922 and 1932 Americans spent $2.5 billion annually on commercial, income-producing buildings.[58] According to Paul Robertson, by 1930 commercial building in the United States was capitalized at well over seven billion dollars, an amount in excess of the entire automobile industry, equal in size to the steel industry and half the size of the railroad industry.[59]

Fortified by investment capital, commercial architecture demanded that close attention be paid in its design to strategies which maximized building production. "We build for investment," Charles Whitaker had told his readers in the AIA Journal in 1919.[60] But within the 1920s, governmental patronage of architecture also changed subtly in its character, shifting away from its preference for a monumental classicism toward a less self-conscious aesthetic and an emphasis on maximizing the value of public funds. The change in approach was manifested most strongly in the reorganization of the governmental planning offices which issued the programs and awarded commissions for work. In the late 1920s, for example, New York State abolished the independent offices of the "State Architect" and relocated those responsibilities within a subordinate arm of the Departments of Public Works. As a former head of the Office of the State Architect, Sullivan Jones, noted in 1927, in New York State a selective criteria for public building emerged that was based on the State's desire to provide economical structures to satisfy the needs of its hospital system and administrative offices. Ironically, the Office of State Architect which had been initiated under Theodore Roosevelt when he served as Governor in 1899 was dismantled during the gubernatorial tenure of his nephew, Franklin Delano Roosevelt, which began in 1928. A similar proposal was made in 1927 to relocate the U.S Commission of Fine Arts which oversaw the work in Washington D.C. to a newly formed federal Division of Public Works operating within the Department of the Interior. While these changes were not predicated on devising buildings which

[57] Holden, "Building Prospect for 1926," p. 87.
[58] Charles Lench, The Promotion of Commercial Buildings (New York, 1932), p.39.
[59] Paul Robertson, "The Skyscraper Office Building." AF 52 (June 1930): pp. 878-80.
[60] Charles Whitaker, "Shadows and Straws." AIAJ 7 (April 1919): p. 144.

generated profit they did indicate a consensus emerging within the political arena for responsible expenditures of public funds producing buildings which maximized usable space.[61]

Many American architects professed the creed of profitability and spatial maximization and a willingness to reformulate the priorities of their design methods accordingly. Writing in an issue of the recently founded magazine Building Investment and Maintenance in 1926, Harvey Wiley Corbett observed that a new emphasis on building production had taken root among architects demonstrated by their interest in "more efficient methods of design whose results are reflected in increased rentability, new types of materials and equipment by which the first cost of construction may be reduced and a newer and broader grasp of the fundamentals of building economics."[62] In his autobiography, William Starrett similarly noted that commercial architecture had forced the architect to move beyond his traditional role as a "designer" and to assume the task of developing efficient and economical plan configurations. "A good architect," Starrett wrote, "by his arrangement of elevators and corridors can get as much as twenty percent more return out of a given building than can a poor architect."[63] In 1928, the same year that Starrett's memoir was published, George Edgell published his book, The American Architecture of Today, in which he suggested that architects were eager to tout their abilities to produce spatially efficient and economical buildings. Edgell, who was also Dean of the Architecture School at Harvard University between 1922 and 1935, wrote, "One of the most encouraging aspects of the art today is the way clients are beginning to realize that the architect's knowledge of planning can save him money."[64]

The ascendence of commercial architecture and its acceptance by architects as the principal focus of their work further challenged the conventional modes of thinking about what constituted high and low categories of building. Architectural texts still characterized buildings according to their cultural worth -- from prestigious religious, cultural, and political institutions to

---

[61] See Sullivan Jones, "Public Buildings and the Architect," AF 58 (April 1928): pp. 577-78; and "Editorial," AIAJ 15 (November 1927): pp. 341-42.

[62] Harvey Wiley Corbett, "How Zoning Laws Affect Contours and Rentability," Building Investment and Maintenance 1:8 (April 1926): pp. 17-19.

[63] W. Starrett, Skyscrapers, p. 313; p. 98.

[64] Edgell, p. 289.

the utilitarian and socially base. Architects who proclaimed the importance of commercial

building to their practice were compelled to accept the lowly status of its program. In 1922, John

Taylor Boyd described a division between buildings "of a permanent type" such as public,

institutional, or high class residential building and the "commoner" buildings erected for

commercial or industrial purposes.[65] He explained that governmental buildings, religious

architecture and important residences warranted a high level of attention from the architect.

Commercial and industrial buildings, on the other hand, did not require as diligent an effort in

their design. In his Manual of Office Practice, Frederick Adams similarly divided buildings into

three categories: public and monumental buildings; fine residences; and commercial and industrial

building. While Adams argued that the first two demanded the special attention of the architect

the last category of building needed only the simplest and least expensive design and materials.[66]

In his Drafting Room Practice, Eugene Clute divided buildings into two types only: those which

earned money and provided shelter; those which just provided shelter. In fulfilling the purpose of

shelter alone, a building might simultaneously satisfy the more abstract conditions of "beauty".

But, Clute maintained that one judged the success of a "building for profit" by its ability to meet the

financial expectations of its investors above all else.[67] At the same time that these texts disparaged

commercial building, the architectural press published articles and illustrations that featured

prominent examples of buildings for profit such as the urban highrise whose frequency revealed its

proliferation as a pre-eminent category of professional work. In 1920, for example, the number of

large residences and religious buildings illustrated in Architectural Record far outnumbered those

of office buildings or tall apartment houses. By 1930 residential hotels, office buildings and

apartment buildings outnumbered every other category of construction.[68]

---

[65] John Taylor Boyd, "A Departure in Housing Finance," AR 52 (August 1922): p. 34.

[66] Frederick Adams, Manual of Office Practice (New York, 1924), pp.52-6.

[67] Eugene Clute, Drafting Room Practice (New York, 1928), p. 5.

[68] These statistics are based on a count of the buildings illustrated in Architectural Record over the course of these years. AR not only illustrated buildings which were described in an accompanying article but also included photo essays of projects about which little or nothing was written. These lists record those buildings which were shown in photographs:

1920		1930	
Residences	43	Residences	18
Churches	9	Office Buildings	13

Within the domain of "buildings for profit" the highrise building offered what seemed to many architects to be a compromise between the civic orientation of monumental and institutional building and the utilitarian demands of commercial architecture. In an article appearing in Architectural Forum in 1928, a writer explained that within the range of buildings that existed between monumental and industrial architecture "it is in the designing of [the highrise office building] that the greatest possibilities are open to the architect" due to their urban presence and their public orientation.[69] Yet, in their discussions of the methods which they employed in the design of highrise buildings -- especially those buildings whose form was constrained by the newly enacted zoning ordinances -- architects demonstrated that the monumentality of the highrise building did not relieve the determinism of the profit motive. To borrow the categorization of design modes used by Eugene Clute, "beauty" and "profit" were frequently placed at odds with one another in the mind of designers working in the area of commercial architecture. Thus, the fact that highrise buildings constituted memorable components of American cities did not mean that their builders or designers could be expected to place aesthetic concerns over economic ones.

In their efforts to promote design issues suitable to their professional opportunities in the 1920s, 'theorists,' a term we must use lightly in this context, described the patterns of decision-making that architects pursued in the area of commercial architecture. In 1923, for example, Harvey Wiley Corbett initiated a brief study of the impact on the design of tall buildings of the New York City zoning ordinance that had been implemented before the war. Sensing that the

Memorials	9	Apartment Houses	10
Banks	7	Gas Stations	6
Libraries	7	Stores	6
Mints	1	Hospitals	4
Hospitals	1	Housing Projects	4
Schools	1	Theaters	3
Stores	1	Schools	3
Recreation Bldgs.	1	City Halls	2
Garages	1	Auto Showrooms	2
Mausoleum	1	Museums	1
		Airports	1
		Bridges	1

[69] "Office Buildings." AF 48 (January 1928): pp. 5-23.

ordinance -- which placed restrictions on the volume of tall buildings and proscribed a "set-back"

formula which called for a recessing profile back from the street edge -- introduced new limitations

on building production superseding even those of technology and program, Corbett attempted to

understand the likely response of a profit-motivated investor. "The moment the law put these

restrictions on the use of property," Corbett wrote, "the reaction of the owners in general was to

want the most they could get under the law." He continued,

> As a result, the owner not infrequently comes to the architect with the intention
> of getting all the law allows him. He may say to the architect even before he tells
> him the purpose the building is to be used for, "How much bulk of building can I
> get?"[70]

In the illustrations provided by the delineator, Hugh Ferriss, Corbett showed how the

designer mediated between the zoning ordinance's restriction of volume and his client's desire to

maximize the "envelope" of space enclosed by the future building. After first describing the

virtual profile defined by the ordinance for a specific land parcel, the new design process passed

through a series of phases in which the architect made adjustments according to other limitations

imposed from within the development project (figs. 3.30, 31, 32, 33). Observing that the building's

depth would exclude light and air from passing to its inner-most spaces making them unrentable,

Corbett conjectured that the architect would most likely propose cutting light shafts into the

volume of the building. Next, recognizing the constructional impracticality of the sloping profile

given by the ordinance, the architect might suggest a faceted form to correspond to the

configuration of the steel frame. Corbett also noted that a practical limit existed for the tower's

height determined by the convergence of two factors. The architect was forced, on the one hand,

to calculate the floor area consumed by elevator cores whose number grew as the tower height and

rentable floor area increased and, on the other hand, to determine at what point the space

required for those cores excessively consumed the limited space of the tower.

This pattern of decision-making indicated to Corbett that the presence of a zoning

ordinance made the value of the architect's "service" more tangible by casting the professional in

---

[70] Harvey Wiley Corbett, "Zoning and the Envelope of the Building," PP 4 (April 1923): pp. 15-18.
[71] Ibid.

the role of interpreter of the law's impact on each parcel of land and making him a mediator

between the disciplinary order of zoning and the client's desire to maximize the volume of the

building.[72] Indeed, Corbett concluded that it was only after these studies had been made to

determine the maximum envelope that the architect might begin to design the exterior ornament,

adding it to the building volume and deciding, in his words, if it should have a "Modernized, classic"

appearance or if a "Gothic inspiration" would be better suited. The aesthetic characterization of

the building was, therefore, "merely the last stage in the development of the problem of getting all

the law allows" (fig. 3.34).[73]

Practitioners in the 1920s generally accepted the notion that the design process for a

highrise commercial building was evolutionary and contingent on the economic factors of building

production and the marketability of its space. Carrying out Corbett's preliminary thoughts, W.C.

Clark and J.L. Kingston began to research the relationship between construction cost, rental

income and operating expenses in order to establish an optimum "envelope" for highrise building

(figs. 3.35, 36). The Kingston and Clark study, performed in the late twenties and published as The

Skyscraper: A Study in the Economic Height of Modern Office Buildings in 1930, demonstrated

that the emphasis on maximization reoriented the design process and shifted its primary focus

from issues of material form to the quantitative assessments of returns on investment. The

emphasis on the "maximum envelope" also suggested that architects were prepared to abandon the

design conventions espoused by both the Ecole graduate and adherents of the Chicago School

which defined the design process as an aesthetic visualization and interpretation of the building

program, its structure, or the materials in which it was to be realized. Instead, the process which

Corbett described began with a formal precondition given by the optimal volumetric perimeter

permitted by law and then resolved the programmatic, constructional, and material problems

posed by that configuration.[74]

---

[72] Mumford criticizes this argument and Corbett's work generally in "Climax," AIAJ 13 (December 1925): pp. 454-56.

[73] Corbett, "Zoning," p. 18.

[74] Boyer, pp. 161-2.

Some architects celebrated this methodology and the new forms it helped to generate.

Irving Pond, a former AIA President, regarded the stepped profile as a means of destroying the

architectural conceit which had caused the tower/office building to be interpreted as a giant

column.[75] Thus, these new towers were released from the bonds of a design process in which the

architect as interlocutor struggled to interpret the form by association with traditional or

conventional architectural vocabularies. Instead, as Corbett wrote, the building form could be left

alone, "standing forth in a way to emphasize the dominating characteristics of the form of a

building under the set-back provisions."[76] Corbett continued to proclaim the social value of these

buildings, whose speedy construction and efficient utilization of space resulted in savings that could

be passed on to Americans at large.

But the automatic character of a design method whose formal parameters were

determined by mathematical calculation precluded the architect from experimentation which did

not take as its prime directive the goal of more efficient spatial containment. On the one hand, the

strategies of design prioritized by the profit motive contrasted with important components of

French academicism. A telling comparison to Corbett's formulation of a working method for the

architect is offered in a defense of "Beaux-Arts principles" published by the architect Donn Barber

in the AIA Journal in 1922. In explaining his conviction in the use of historical styles as models for

contemporary work, Barber noted how they possesse. ualities of scale which had been overturned

by large-scale industrialized building methods advocated by Corbett and others.[77] In this way the

methods of historical eclecticism could offer a defense against the automatic formal results

produced by the design process outlined by Corbett. But, in the scenario drafted by Corbett, the

architect's first opportunity to impose a formal order on commercial building occurred only after

technical, economic and legal limits had been determined. In the Corbett model the primacy

accorded to the profit motive pre-empted the resistance which Beaux-Arts formalism or the

authority of stylistic languages might offer to its utilitarian demands. Moreover, as Eugene Clute

[75] Irving Pond, "Zoning and the Architecture of Big Buildings." AF 25 (October 1921): p. 131-3.

[76] Corbett, "Zoning," p. 18.

[77] Donn Barber and Bertram Goodhue, "American Architecture in England," AIAJ 10 (January 1922): pp. 16-19.

explained to his readers in his manual on office practice, the academies had always stressed the singular authority of the "parti," the term used to describe the basic concept of a building expressed at the very outset of the design process by the architect and intended to remain as a reference to the first moment of "artistic" inspiration.[78] By contrast, the methods proposed by Corbett and Clark and Kingston produced the building envelope incrementally through the gradual accumulation of salient data.

The automatic character of this design process also restricted the potential for formal invention created by modern construction techniques and new materials. In an article published in the AIA Journal in 1923, the German architect, Walter Curt Behrendt, observed the resistance to formal experimentation in American highrise building and urged architects to permit the unique and qualitative characteristics of varied structural systems to guide them in their design of the building form. Eager to demonstrate the potential of this approach, Behrendt showed the proposals for highrise buildings conceived by the German architects, Hans Poelzig and Ludwig Mies van der Rohe (figs. 3.37, 38, 39). Star-shaped to permit access to light and air even from the center of the buildings, Behrendt claimed that the tower schemes benefited from the fully exploited curtain wall system which permitted the architects to reduce the structure which appeared in the exterior walls to a minimum. Behrendt explained that these projects gave evidence of the results possible were architects to design according to principles and priorities "intrinsic" to the materials in which they built.

> In the projects here reproduced the peculiarity of the purpose and the properties of the materials have dictated the law, according to which the form has been developed. Consequently there has resulted a structure of a new and formal aspect, independent of academic, classical traditions and expressive only by virtue of its own intrinsic character, visible in the ponderousness of its mass and in the vigor and peculiarity of its appearance.[79]

In a reply to Behrendt's article, George Nimmons laid out the working method of American architects by suggesting that building form was determined by the configuration of the site and the agenda of maximization necessitated by the profit motive.

[78] Clute, p. 1; see also Egbert, pp. 114-15.

[79] Walter Behrendt, "Skyscrapers in Germany," AIAJ 11 (September 1923): p. 368.

> The reason that the American skyscraper is lacking in diversified form or plan and that it is nearly always rectangular or square with interior courts is that the land here upon which these skyscrapers are built is always of such high cost that the owner in order to be able to earn the interest or the overhead carrying charge of the value of the land, cannot afford to have any part of it not occupied by the building.[80]

Based on these criteria, Nimmons proceeded to criticize the German designs on the basis of their

failure to deliver sufficient usable space. Although Nimmons took minor issue with the

appearance of these unorthodox designs, he focused his severest commentary -- and ultimately

discounted the designs -- for their inability to demonstrate conformance to the logic of

maximization. Thus, for Nimmons the work presented by Behrendt was inadmissible as evidence

of a strategy for design capable of surviving in the American context.

Several critics took issue with what they perceived to be the tacit acceptance by architects

of economic conditions that set severe limits to the design process. Outlining a new program for

"architectural criticism" which he published in the AIA Journal, Frederick Ackerman chastised

architects for caving in to the economic pressures they encountered in the course of designing

commercial architecture.

> Architecture that is derived from the acceptance of any and all conditions that surround a problem as constituting an adequate program holds but a meager claim to be so rated: it is merely an expression -- its creators, tools.[81]

In a similar vein, Arthur Penty concluded that, "this architecture is finally a purely economic

creation, owing its existence to the development of mechanical invention, advertisement, the desire

to capitalize ground values, and the new zoning law."[82] Lewis Mumford concurred with Penty: "It

is only in a state of complete financial automatism that the architect can be excused for thinking

that good architecture depends upon the existence of a zoning law."[83] In 1924, Mumford

challenged the whole ideological underpinning of design methodologies constructed around the

priorities of efficiency and maximization in his text, Sticks and Stones. In contrast to the architects

who merely accepted the conditions of their practices (including the priorities of efficiency and

---

[80] George Nimmons, "Skyscrapers in America," AIAJ 11 (September 1923): p. 370.

[81] Frederick Ackerman, "The Function of Architectural Criticism," AIAJ 16 (April 1928): pp. 144-47

[82] Arthur Penty, "Architecture in the United States," AIAJ 12 (November 1924): pp. 473-78.

[83] Mumford, "Climax," pp. 454-6.

maximization established by the demands of investors for profitable returns), "modern architects" had a responsibility to immerse themselves in the productive methods they directed and to formulate designs with the controlled inspiration of the "craftsman." He wrote,

> Here lies the justification for the modern architect. Cut off though he is from the actual process of buildings, he nevertheless remains the sole surviving craftsman who maintains the relation toward the whole structure that the old handicraft workers used to enjoy in the connection with their particular job....The freedom to depart from arbitrary and mechanical precedent, the freedom to project new forms which will more adequately meet his problem are essential to the architect.[84]

But despite Mumford's admonition, the agendas of maximization and efficiency proliferated with the rise of commercial architecture and manifested themselves as fixed and universal conditions of building production imposing themselves on architectural practice. In 1932, the comments of the architect, Benjamin Betts, recalled those of Charles Whitaker a decade before who had advised that architects orient their work toward the production of profit. "Architects will do well to realize that their contribution to the advancement of architecture can lie only in opportunity," Betts wrote. But, he continued, "the opportunity to serve the community must come before any service can be rendered [and] opportunity gravitates to those who are ready for it and can demonstrate to those who control this opportunity that they understand how and why building investments are or can be made financially attractive."[85]

The Emerging Tasks of Building Professionals

The growing presence of speculative capital in the construction industry in the 1920s motivated the diverse group of experts who collectively administered building production to seek out methods with which to procure higher productivity and greater speed in construction. Having already successfully deployed new technologies and machinery these "managers" focused on managerial reform as it had been popularized during the war: contractors, engineers, and architects collaborated in the administration of the production process, from design to construction, each contributing according to the unique expertise they possessed and each abiding

---

[84] Lewis Mumford, Sticks and Stones (New York, 1924), p. 107.

[85] Benjamin Betts, "Introduction" in Lench, pp. 8-9.

by the dominant criteria of maximization. But, whereas the authority of the contractor expanded as his control over labor and materials became more vital to the operations of management and administration, and the engineer's authority over technical matters remained unchallenged, architects themselves acknowledged that their control both over the process of building and over the formal and material aspects of buildings diminished under the patronage of investment capital.

In a brief anecdotal history of the construction industry delivered before the National Convention of the Association of General Contractors of America in 1925, Harlan Thomas, a contractor, described the changes in the organization of building production. In the period prior to the Civil War, he observed, architects had let contracts to craftsmen and managed their work on behalf of their clients, the building owners. By the late 1880s, however, the "general contractor" had emerged as the individual who, once contracted by the owner, managed labor and administered building funds disbursed by the architect. Although the "general contractor" had probably been a craftsman himself, Thomas suggested, his new responsibilities shifted the area of his expertise away from building toward management. It was as a manager and not as a producer of buildings, he concluded, that the "general contractor" claimed remuneration.[86] Extending this same line of reasoning, William Starrett would later claim that the contractor's activities did not demand any special technical knowledge but instead required primarily good management ability. Indeed, he claimed, the contractor's knowledge of structural and mechanical engineering or architectural design might be limited. Some of the best contractors, he noted, were trained as lawyers. Attempting to generalize, Starrett concluded that contractors were "technically educated business managers...administrators and executives not specialist technicians."[87]

Both Thomas and Starrett made these observations in support of the efforts to gain professional status for the contractor undertaken by groups such as the Association of General Contractors of America and the American Construction Council who claimed that contractors

---

[86] Harlan Thomas, "The Relation of Construction to Design," AIAJ 14 (March 1926): pp. 91-94.

[87] The brothers, Paul and Theodore Starrett, were both trained in the office of Daniel Burnham. Paul became head of George Fuller Construction Company before beginning his own company with another brother, William. Theodore headed up Thompson-Starrett Construction. See W. Starrett, Skyscrapers on the Starrett family. John Reynard Todd of Todd, Robertson and Todd, contractors for the Rockefeller Center was trained as a lawyer. See Chase, p. 111.

provided a "service" rather than a product.[88] As Starrett explained, the managerial emphasis of

general contracting was nowhere better shown than in the makeup of the larger construction

companies which by the 1920s had absorbed the activities of management into the structure of

their organizations. Companies such as Starrett's offered not only a clerical staff and expertise in

bookkeeping but also an expediting department whose personnel supervised the ordering,

production and delivery of materials and machinery, and payroll departments which controlled

compensation and offered constant supervision of labor productivity. Speaking before the

American Society of Civil Engineers, Ward Christie expressed the sentiment of many of his fellow

contractors when he noted that,

> Contrary to popular conception the principal function of the general contractor is
> not to erect steel, brick or concrete but to provide a skillful centralized
> management for coordinating the various trades, timing their installation and
> synchronizing their work according to a predetermined plan.[89]

This model of contracting was emulated by the George Fuller Company, one of the

country's largest construction firms. Fuller, like many other companies of its size, operated in a

number of cities simultaneously with offices in Chicago, New York, Baltimore, and Pittsburgh.[90]

They established a reputation as an efficient organization. Unlike many other construction

companies, Fuller sub-contracted the bulk of its work out; their construction staff was small. Paul

Starrett, President of Fuller until the 1920s, devised the terms of service offered by the firm,

restricting its work to the letting of contracts and the administration rather than the execution of

work. When possible, Starrett also preferred to receive Fuller's payment for building on a cost-

plus-fee basis keyed to the actual expense of construction rather than as lump sum determined in

advance of construction on the basis of the contractor's estimates of material and labor costs.

Starrett reasoned that rather than paying his company in exchange for the building, his clients were

---

[88] Executive Committee Minutes, November 1929, AIA RG 501-4. The Minutes refer to an article by Thomas
Flagler which appeared in Nation's Business, (September 1929).

[89] W. Starrett, Skyscrapers, p. 87.

[90] On Fuller Construction see P. Starrett, Skyline; see also W. Starrett, Skyscrapers, pp.32-34.

purchasing Fuller's organizational and administrative services which included its capacity to employ and supervise labor and order material during construction.[91]

Fuller also offered its clients a financially stable organization reinforced by the size of its operations and its connections within the building industry. By 1915, Fuller was a publicly traded corporation worth in excess of $15,000,000.[92] The company's assets were a reassuring indication to their clients that its borrowing power was high and that the flow of money would remain constant during a project. The large scale of the Fuller operation also provided a leveraged bargaining position with both labor and materials suppliers. The size and frequency of his steel orders enabled Starrett to bargain for low prices. Starrett also maintained close personal relations with executives within the corporate hierarchy of the major steel companies.[93] Moreover, the company provided thousands of jobs to union members on projects throughout the country which gave it bargaining power with organizers and union leaders.[94] By the 1920s the Fuller Company's renown as an effective builder was so broad that they were commissioned to build the first steel frame high rise in Tokyo, Japan.[95]

Other construction companies such as Thompson-Starrett, Turner Construction, Fisk Building Corporation, Todd, Robertson and Todd, also operated out of major American cities on a national scale. Like Fuller, these were large corporate entities. By 1932 Turner Construction was reported to have been responsible for over $350,000,000 worth of construction since its founding at the turn of the century. In roughly the same period, Thompson-Starrett erected over $600,000,000 worth of buildings in Chicago, Baltimore, Washington D.C., San Francisco, Cleveland, Pittsburgh

[91] W. Starrett, Skyscrapers, p. 32-33. In 1928, William Starrett suggested that the example for this model of contracting was given by George Fuller, the patriarch of Fuller construction, who died in 1900. "He was a new type of contractor, pioneering an administrative revolution in construction....Fuller raised contracting from a limited trade to both an industry and a profession, visualizing the building problem in its entirety - promotion, finance, engineering, labor and materials."

[92] P. Starrett, Skyline, p. 96.

[93] Ibid., pp. 305-8. Their clout was particularly important during the 14 year tenure of the "Iron League", a cartel-like organization of steel manufacturers who sold their product at higher rates to fabricators with union shops. In 1930 as the head of Starrett Brothers Construction responsible for the construction of the Empire State Building, Paul Starrett was able to save $250,000 on the steel prices by buying from Post & McCord, a non-union shop. Starrett suffered from its decision when the Housesmith's Union struck against other of their jobs in protest. The League was ultimately dissolved under pressure from the federal government and the investigations carried out by the Lockwood Commission.

[94] Ibid., pp. 220-21.

[95] Ibid., pp. 213-14.

and New York.[96] Some of these contracting firms varied in important ways from the Fuller

Company Thompson-Starrett, for example, maintained its own building teams and equipment for

a variety of trades such as structural steel and concrete. But in general the large construction

company functioned in a similar capacity as Fuller, providing administrative expertise, capital and

well developed relations with industry and labor organizations for their clients.

In contrast to the loosely amalgamated contractors who rallied behind efforts to achieve a

professional status for their activities, the engineering professions had established a position for

themselves removed from the construction site, laying out the increasingly complex structural,

mechanical, hydraulic and electrical systems utilized in large and programmatically diverse building

projects. Engineers had not inaugurated their professional status without changing the character

of their work. As Daniel Shodeck has explained, the history of civil engineering before 1870

records both the ingenuity of the engineers' technical solutions as well their exploits in the field,

simultaneously designing and building, for example, the American inland waterways and railroad

network.[97] By the 1890s, the emphasis within schools of civil engineering shifted to more

theoretical methods of analysis enabling engineers to handle complex building structures such as

the tall office building.[98] By the late 19th century, engineers employed in architectural offices such

as John Ewen, an engineer with the Chicago firm of Burnham and Root, or working separately in,

for example, the firm of Purdy and Henderson, which began by designing bridges, were capable of

forging innovative structural solutions to complex building problems without empirical

experimentation. Instead, they were able to develop sophisticated solutions with the aid of

technical information codified and assembled in texts such as Frederick Baumann's book, A

Theory of Isolated Pier Foundations (1873) which, as Carl Condit has observed, was vital to the

advancement of building technology in Chicago.[99] With their designs developed, engineers passed

drawings on to builders and material fabricators confident that they could complete the tasks of

---

[96] Horowitz and Sparkes.

[97] Shodeck, pp. xvii-xviii.

[98] Ibid., p. 268.

[99] Condit, Chicago School, p.36.

195

production and assembly.[100] By the 1920s William Starrett could report that in general "[t]he involved calculations necessary to great structures are worked out in advance...by a professional structural engineer."[101]

For architects, the growing complexity of both engineering and construction management in the late 19th and early 20th centuries militated against the generalist practice described by Harlan Thomas in which they had both designed buildings and supervised construction. Numerous architectural firms did exist in the 1920s which provided a full range of services such as the offices of Albert Kahn.[102] The firm of Lockwood, Greene and Company offered architectural, engineering as well as construction management services as did Turner Construction, and the large engineering firms of Stone & Webster and J.G. White Engineering.[103] But these were exceptional cases outside of the norms of professional experience, judging by the commentary of George Edgell. The complexity of engineering and construction management, he wrote, "makes the position of the modern architect and especially the American architect entirely different from anything that it has ever been in the past."

> Though he were an encyclopedic genius, with a mind like Leonardo da Vinci's, it is inconceivable that he should design all of his building with all of its component parts as an individual so designed it in the Middle Ages or the Renaissance. He cannot design the bulk of a skyscraper and, at the same time, its machinery for elevators, for heating, for plumbing, and for lighting...he must employ and cooperate with the engineer in his many specialties and even in many cases with the lawyer, the sociologist and the sanitary expert.[104]

As Edgell observed, the new matrix of relationships unleashed by modern construction and engineering practices mandated the cooperation of the architect with other "experts" in the building field, a notion which, as we saw in the previous chapter, had also been advanced by the AIA's Post-War Committee. As envisioned by the members of the Post-War Committee "right-

---

[100] Shodeck, p. 268. See also William Starrett, "The First Skyscraper," reprinted in Lewis Mumford, The Roots of Contemporary American Architecture (New York, 1972), pp.237-42.

[101] W. Starrett, Skyscrapers, p. 33.

[102] George Baldwin, "The Offices of Albert Kahn, Architect, Detroit, Michigan," AF 29 (November 1918): pp. 125-30

[103] Rayner Banham, A Concrete Atlantis: U.S. Industrial Building and European Modern Architecture (Cambridge, MA, 1986), p. 31; John Taylor Boyd, "Wall Street Enters the Building Field," AF 50 (May 1929): p. 772.

[104] Edgell, American Architecture, p. 12. See also Manfredo Tafuri, "The Disenchanted Mountain: The Skyscraper and the City," in Giorgio Ciucci et al., The American City: From the Civil War to the New Deal (Cambridge, MA, 1979), p. 466.

relations" would permit individual participants to make contributions in those areas of work for which they were uniquely qualified and would result in greater efficiencies in building production. In his book on "Commercial Building" published in 1932, Charles Lench also concluded that the demands for efficiency in building production required a coordinated effort. "Many observers believe," Lench went on to write "that there is to be a merging of architect, realtor, banker, builder, operator, mortgage broker, attorney, and owner in one organization where all will cooperate in the interests of each other."[105] William Starrett regarded the enforced cooperation of the architect with other experts within the construction process as a way of relieving architects of responsibilities for which they were not well qualified. "As buildings grew in magnitude," Starrett wrote, "architects were overwhelmed with a multiplicity of burdens for which many of them had little training and no aptitude." But, once the contractor and engineer assumed these "burdens" the architect could revert "to his original function of design."[106]

Architects did express a concern that within this emerging constellation of experts, the voice of the architect would be overwhelmed by those who represented areas of expertise more relevant to the goal of increasing the speed or lowering the cost of construction. Secure in his role as a collaborator, Albert Kahn nevertheless observed a fear arising among architects that "contracting engineers and material men are usurping the architectural field" relegating "beauty" to a lower level than financial issues with which the contractor dealt or the search for structural simplicity in which the engineer was engaged.[107]

In their relationships with engineers, architects did have models of professional practice that delineated the field of their expertise. Progressive architectural thinking reinforced the notion that architecture and engineering were discreet yet interdependent disciplines. Writing in the 19th century, Montgomery Schuyler had established an American precedent for this mode of thinking, differentiating between architecture and engineering in his criticisms of bridges and tall office buildings by invoking 19th century Ruskinian criticism to explain how "art" and "technology"

[105] Lench, p. 42.
[106] W. Starrett, Skyscrapers, p. 33.
[107] Albert Kahn, "Federal Aid to the Social Welfare." AF 57 (August 1932): p. 96.

converged in three dimensional form.[108] In the late 19th century, Louis Sullivan had lived out this idea of collaboration in his practice with Dankmar Adler. The long-standing separation of the Ecole des Beaux-Arts from the faculties of engineering yielded a pedagogy to which American architects, trained in that system, had been exposed that upheld the ideological separation of Art and Science. Within this intellectual context, however, theorists such as Viollet-le-Duc had offered examples of structural principles sustaining the architect's work and enlarging his formal vocabulary. Writing in 1928, Paul Cret named Henri Labrouste as his intellectual inspiration for the work he had done on the Delaware River Bridge (fig. 3.40). In the article he suggested that the architect should make the principles of structure at work in the engineer's design visible, a description of the design process which came close to Schuyler's analysis of the design of the Brooklyn Bridge written thirty years before.[109]

But, the relationship between the architect and the professional builder or general contractor, whose managerial skills and organization were necessitated by large building projects and whose input on building processes was developing as a separate area of expertise, was newer and less well formulated. Within the decades before WW I, commercial real estate developers adopted the practice of hiring the contractor and architect at the same time and insisting on their close collaboration. With increasing frequency, the architect formulated his designs under the scrutiny of the contractor who provided the client with a constant review of anticipated costs. Paul Starrett described two such incidents in which the Fuller Company was involved. In 1910 their review of the plans for the East River Savings Bank designed by Clinton and Russell eliminated $150,000 from the building cost. In 1919, Fuller was hired at the same time as McKim Mead & White to help in the development of plans for the Pennsylvania Hotel. "I had been learning from experience," Starrett later wrote,

> ...that it was of tremendous advantage all around -- to owner, architect and
> builder -- that the builder should be chosen at the same time as the architect, so
> that he could be in on the plans as they were developed. From his practical

[108] See for example Montgomery Schuyler, "The Bridge as a Monument," Harper's Weekly 27 (May 26, 1883): p. 326ff, reprinted in Schuyler, American Architecture and Other Writings, William Jordy and Ralph Coe, eds. (Cambridge, MA, 1961), pp. 331-44.

[109] Paul Cret, "The Architect as Collaborator with the Engineer," AF 49 (July 1928): pp. 97-104.

viewpoint he could show the owner and architect the way to hundreds of economies.[110]

H.C. Turner of Turner Construction agreed with Starrett in his assertion that the early involvement of the contractor informed the decision-making process engaged in by the architect and owner. But Turner's comments also revealed the determining role of the contractor's input on construction methods and material possibilities and seemed to justify the fear of a loss of authority expressed by architects and recorded by Kahn. "There will be found to be several ways of building the structure and also a choice of building materials," Turner wrote in the Architectural Forum in 1930.

> [But] Estimates of relative costs of these methods and of the available materials will open a discussion which may well fix a procedure which will have a determining effect upon the ultimate cost and financial success of the operation.[111]

By the late 1920s, architects such as the young Walter Kilham, an employee in the firm of Raymond Hood, were themselves reporting that in the construction of large buildings early collaboration between the architect and contractor was a common occurrence.[112] In 1930, Richmond Shreve of the architectural firm of Shreve, Lamb and Harmon, the successor firm to the office of Carrere and Hastings, also suggested that it was typical. But Shreve observed that the conditions of modern building production, which had necessitated this matrix of relationships, had unseated the architect from his position as the authority on the formal and material qualities of buildings. "The architect is still the leader in his art, the coordinator of constructive forces, the master of his craft," he wrote.

> ...but in the field of such intense activity as surrounds the construction of the great railroad terminal, in the lofty space and deep-seated base of the modern bridge, in the towering commercial structures of our large cities, in all of these the architect has his role, but as part of an organization -- not as a despot.[113]

---

[110] P. Starrett, Skyline, p. 160.

[111] H.C. Turner, "The Selection of the Builder," AF 33 (October 1930): p. 522.

[112] Walter Kilham, Raymond Hood (New York, 1973), p. 17.

[113] Richmond Shreve, "The Empire State Organization," AF 52 (June 1930): pp. 771-74.

Capitalizing Building Production in the 1920s

The changes in the architect's proclamations of professional service coincided, as we have noted, with the increases of investment capital available to American building production in the 1920s. However, it was not merely the presence of speculative capital which resulted in its impact on the construction industry but the evolution of more effective methods of its procurement and application to building production. Large institutional investors, already a familiar presence in the construction industry by the last decade of the 19th century, provided the instruments by which investment capital from a broad, diverse and growing field of private investors was funnelled into real estate development. For example, having begun in the 1890s to experience a pattern of dramatic growth that would continue for the following fifty years, insurance companies increased their involvement in the mortgage market. In the 1900s, the stability of values in urban real estate, combined with the growth of cities, encouraged federal regulators to allow commercial and national banks to join state and local banks in making investments in real estate. In 1927, the passage of the McFadden Act permitted national banks to invest up to twenty-five percent of their capital in real estate mortgages and between 1920 and 1931, real estate loans by member banks of the Federal Reserve increased by 300%. The growing monopolization of building investment by these institutions resulted in the standardization of loaning practices and a reduction in administrative expenses which in turn lowered the costs of investment capital to prospective builders and building owners. Moreover, the size of these institutions facilitated larger construction projects such as the urban highrise which required units of capital whose size was beyond the means of most individual lenders. In the 1920s, institutional investors provided an essential mechanism by which the fluidity of capital markets that were untapped by managers within other sectors of American industry could be quickly absorbed into building production.[114]

The success of institutional investors in attracting capital to the construction industry had repercussions beyond the expansion of building production. Their financial support was characterized both by its anonymous representation of investors' interests and its emphasis on

---

[114] Leo Gerbler, _Capital Formation in Residential Real Estate_ (Princeton, NJ, 1956), pp. 194-208; see also Miles Colean, _American Housing: Problems and Prospects_. NY, 1947.

200

quantitative and primarily profit-oriented results in its selection of investments. As Leo Gerbler

has pointed out in his study of capital in residential real estate, the general trend away from

individual to institutional investors in mortgage lending in the 1920s tied the mortgage market to

other capital markets and brought about the standardization of both its assessments of credit-

worthiness and the expectations of returns on invested capital.[115] Thus, through their

determinations of the viability of investment alternatives, institutional investors reinforced the

notion that the purpose of building production was to provide a vehicle for magnifying the value of

capital.

Even among private investors, the emphasis on expanding capital and the desire to

procure greater control over the building projects they funded is evident. Throughout the late

nineteenth and early twentieth centuries, private corporations and syndicates of wealthy individuals

were active lenders into the mortgage market. One of the best known of these, the U.S. Realty

Company formed under the direction of Harry Black, the son-in-law of George Fuller and

chairman of Fuller Construction, offers a case in point. It was Black's goal to assemble a syndicate

of millionaires whose pooled interests would form the basis of a real estate investment

organization. Together with Charles Adams, Henry Morgenthau, John Gates, Henry Higgins,

Charles Schwab, James Stillman, and Cornelius Vanderbilt, Black was able to bring together

$66,000,000 in capital between 1904, when the company was founded, and WW I which he applied

to real estate development. U.S. Realty owned properties: for example, the company had

purchased the building housing the department store R. H. Macy's in New York City. But Black

could also provide funding to large property owners who did not possess the capital to build or to

enlarge their buildings. These owners might be individuals but were more often corporations with

their own buildings looking to "trade-up" to larger facilities.[116]

The promotion of real estate development by contractors such as Black was not new in the

1920s. In the 1890s commercial real estate had provided ample terrain for hucksters like Black's

father-in-law, George Fuller, to assemble deals, uniting individuals with property, money, and the

[115] Gerbler, pp. 194-208.

[116] P. Starrett, Skyline, p. 118.

need for building space with architects, bankers and leasing agents to develop buildings that he would build.[117] Louis Horowitz, an officer with Thompson-Starrett, performed a similar role in New York at the beginning of his career. Richmond Shreve characterized Horowitz's activities and strategies as a builder in the 1920s.

> [Horowitz] became increasingly aggressive in conceiving projects himself and then cajoling into partnership necessary human elements possessing desire and site and capital to the end that there would be another big building against the skyline. Under him Thompson-Starrett Company could undertake to furnish whatever might be missing from a half-formed set-up, even to the extent of searching out some proper one to be the owner of a building wished for by a merchant, a financier, or a hotel man.[118]

In 1932, Thompson-Starrett completed the Waldorf Astoria Hotel, a building which Horowitz helped to finance with funds he raised through the sale of stock in his construction company.[119]

But Black's ambitions for his real estate investment company exceeded those of even Horowitz. He sought both more control over the building process as a means of ensuring the profitability of U.S. Realty's ventures and access to larger amounts of capital with which he could broaden and diversify the scope of its activities. By 1910 Black had incorporated into U.S. Realty all of the necessary services for commercial construction including a leasing agency, an organization which provided building maintenance as well as Fuller Construction, now a subsidiary. By the beginning of World War I, U.S. Realty had its own architectural staff through Fuller.[120] Thus, Black had access to a full range of services -- from financing, through building design, construction, marketing, and maintenance -- which he could offer to his clients.[121] Black's financial aspirations outstripped even the resources of his limited "millionaire" shareholders and he took the company public. U.S. Realty stock sold through the New York Stock Exchange, increasing the company's access to investment capital. By 1928, the company's assets had grown to $73,000,000 with earnings of over $5,000,000 annually.[122]

---

[117] On Fuller's early career see Horowitz.

[118] Horowitz and Sparkes, p. 31.

[119] Richmond Shreve, "Introduction," in Horowitz and Sparkes, p. xii-xiii.

[120] Fuller's architect Yasuo Matsui performed technical services including zoning and building code analyses though Fuller did not actually use him to design commercial buildings. Matsui later left Fuller to follow Paul Starrett who established Starrett Brothers Construction Company with his brother William after WW I.

[121] P. Starrett, Skyline, p. 125.

[122] John Boyd, "Wall Street Enters the Building Field," AF 50 (May 1929): p. 772.

Black was not alone in his desire for a large integrated public corporation with investments in commercial real estate. Other publicly traded realty corporations existed. In New York City, for example, General Realty & Utilities was affiliated with Tishman Realty Corporation, held assets of $42,000,000 in 1929 and participated in well over $100,000,000 worth of construction. The Fred French Company, owners, designers, and builders of Tudor City (built in New York between 1927 and 1929), was also a publicly owned company (fig. 3.41). Lefcourt Realty, builders of the Lefcourt Marlboro Building (designed by George and Edward Blum, completed in 1925), the Lefcourt Empire (designed by Ely Jacques Kahn, completed in 1927) and the Lefcourt State Building (designed by Kahn, completed 1927), was another integrated New York real estate finance corporation with its own management company and construction firm. As with U.S. Realty, which had followed a course of development in which the investor pool it represented became increasingly diffuse while its own assets grew, these organizations shared both the potential for tremendous accumulations of capital and anonymous investor participation. As John Taylor Boyd, a frequent writer on building finance for the Architectural Forum, later observed, these public real estate corporations shifted the emphasis of real estate finance away from the private corporation or syndicates of wealthy investors. Viewing these developments, Paul Starrett concluded that, "large scale construction operations would seem to lie, hereafter, in the field of great corporate undertakings."[123]

Compelled by their fiduciary responsibility, both the public corporation which held equity in real estate such as U.S. Realty and institutional investors which controlled the capital they invested such as banks and insurance companies predicated their selection of suitable building enterprises on the goal of procuring constant economic returns for their stockholders or clients. In contrast to these investment institutions, a variety of smaller investment firms flourished in the 1920s which merely brokered the sale of mortgages to independent investors and which maintained little direct control over the flow of capital.[124] In New York, the G.L. Ohrstrom Company and

---

[123] See John Taylor Boyd, "Wall Street Enters the Building Field," AF 50 (May 1929): pp. 769ff; AF 51 (July 1929): pp. 119ff.; (August 1929): pp. 245ff; P. Starrett, Skylines, p. 317.

[124] W. Starrett, Skyscrapers, p. 110.; Lench, p. 149-50; Boyd, "Wall Street Enters the Building Field," AF 51 (August 1929): p. 249; Horowitz and Sparkes, pp. 197-98.

S.W. Straus were well known investment houses specializing in this area. In Chicago, H.O. Stone & Co. offered a similar investment opportunity to the general public (fig. 3.42).

But in their challenges to their clients to pick the building ventures in which to invest these firms also conveyed -- as did larger investors wielding more control over capital -- the criterion of credit-worthiness into the arena of building production. These organizations advertised the buildings whose financing packages they represented and "sold" their indebtedness to an audience seeking evidence of economic soundness. Ohrstrom's 1928 issue of $2,500,000 first mortgage bonds, for example, financed the Herald Square Building by Clinton & Russell and the company advertised the offering in Chicago as well as New York (fig. 3.43). To convey an image of economic soundness and to encourage investor participation, Straus' advertising and sales staff emphasized the stability of a real estate investment and the importance of investor choice in the purchase of a building and bond package (fig. 3.44). Their advertising offered investors the opportunity to "make a selection from our selection," and to choose from numerous projects with different locations, sizes and rates of return.[125] To encourage investors to participate in the funding of building production, the Chicago based investment firm of Harmon National Realty Trust similarly resorted to advertising to declare that the emerging skyline of Chicago depicted an image of "wealth and power" reinforcing both the claim of financial soundness and market stability (fig. 3.45). Such advertising attracted attention to mortgage financing in the late twenties. As Alfred Bossom wrote, "Buildings and everything connected with it interests everybody in Canada and the United States and skyscraper bonds and mortgages are a highly popular investment and decidedly safer than the average security that can be bought on the Stock Exchange."[126]

The public's enthusiasm for real estate investments which Bossom observed encouraged the financial managers of new building projects to experiment with other forms of investor participation. Rather than borrowing money from a corporate or public source, real estate developers offered the public equity investments in the form of stock -- both preferred and

---

[125] On the Straus marketing method see Horowitz and Sparkes, pp.197-98.
[126] Bossom, Building to the Skies, p. 118.

204

common.[127] Generally used to take the place of expensive second mortgages which covered construction costs and loans with high ratios of borrowed capital to equity, these schemes served an important role in the success of financially marginal projects. Two companies in New York City which specialized in this brand of financing provide us with examples of how these schemes worked. The Fred French Company, itself publicly traded, and Henry Mandel & Associates, architects, builders, owners, and operators of London Terrace, a New York City apartment complex, offered investment plans that permitted investors to purchase shares representing a percentage ownership in the building and property (fig. 3.46). The appeal of these options to investors, though minimal in retrospect, lay in the opportunity they created to benefit from the escalation of real estate values: although dividends were small, the value of investors' portfolios rose with the value of the property. This method of investment held obvious benefits for developers who were able to eliminate the expensive interest payments characteristic of second mortgages. John Boyd commented that the stock plan "with deferred profits and public participation in the ownership of a building is revolutionary in its efficiency."[128]

Whether provided by institutional investors, mortgage brokers, or stock markets, the presence of these financial mechanisms raised the level of competition for solid investment opportunities in real estate in the late 1920s. The capital that they made available to the construction industry resulted in a volume of building which often exceeded demand within the real estate market. In 1927, for example, the New York Times reported that a sluggish rental market had resulted in fewer new building starts which in turn created "keen competition in the mortgage field."[129] That competition caused the cost of money itself to come down gradually, making the environment ripe for speculation. Moreover, the capital fueling these markets generated a climate in which quick resale of property was likely. And, insofar as the motive of investors was

---

[127] Preferred stock received a constant payment of interest whereas common stock (which represented a true equity ownership of the property) returned dividends occasionally and increased in value with the value of the property. Lench, p. 149-50.

[128] Boyd, "Wall Street," AF 51 (August 1929): p. 249; (July 1929): p.124.

[129] "Keen Competition in the Mortgage Field," NYT, 23 October 1927, 11:1.

speculation, it also produced pressure for the construction of larger buildings regardless of the demand for new space. Frederick Ackerman commented on this situation as early as 1923:

> A very large percentage of the structures erected within our rapidly expanding cities serve in the first instance as a medium for the turnover of funds. This turnover of funds takes place through the sale of the property following close upon the erection of the structure or it takes place after the building has served its purpose for some time as an investment, or for paying taxes upon the land, while the land appreciated in value sufficiently to warrant the destruction of the building. In the typical case several structures of ascending value in turn occupy a plot of land before the cost of the structure reaches a point where it no longer appears likely that further appreciation of the land will exceed the cost of the last structure to be erected upon it.[130]

Under this speculative pressure, the average size of office buildings erected in the forty major cities of the U.S. between 1924 and 1930 increased from 61,473 square feet to 217,151 square feet, an increase of almost four hundred percent.[131]

The abundance of capital also made it possible for those who actually undertook to build projects to work with high debt, acquiring money from both public and private sources.[132] Savvy promotion rather than solid demand for more space kept building and land prices jumping so that speculators could maintain investor interest and often avoid investing their own capital. In this climate it was possible for a speculator to buy an option on a property, hire an architect to draw up plans for a new building, seek out lease agreements, finance construction by borrowing on the basis of the anticipated rental revenue, and sell out the package to another investor group even before the building was completed.[133]

Architects themselves were caught up in the rhetoric thrown around by speculators in real estate, mortgage bond houses, leasing agents, contractors, and urban newspapers. In 1929, several of the most prominent New York architects formed their own investment group to venture into real estate development financed through the public sale of stock. Called the Beaux-Arts Development Corporation after their mutual affiliation with the Beaux-Arts Institute of Design (BAID) and the proximity of their project to the proposed BAID headquarters, the architects

[130] Frederick Ackerman, "Craftsmen - Machines - Credit - Speed," AIAJ 11 (June 1923): pp. 249-252.

[131] R.D. MacKenzie, The Metropolitan Community (New York, 1933), p. 220; see also Paul Robertson, "The Skyscraper Office Building," AF 52 (June 1930): pp. 878-80.

[132] W. Starrett, Skyscrapers, p. 111.

[133] Ibid., p. 110.

included the firms of B.W. Morris; Delano & Aldrich; Voorhees, Gmelin & Walker; Charles

Klauder; Hood, Godley & Fouilhoux; and architects John Cross, William Gompert, James

O'Connor and Whitney Warren. The group purchased an option on a parcel of land at East 44th

Street and began a project for the Beaux-Arts Apartments to be financed by Harry Black's U.S.

Realty Company and the National City Bank and to be built by U.S. Realty's subsidiary, Fuller

Construction (figs. 3.47, 48). Money for the $5,250,000 project was raised by the sale of stock to

the general public through National City Company, the bank's securities branch. The architectural

group traded the land parcel for stock and Hood, Godley & Fouilhoux together with the firm of

Kenneth Murchison, the architects of the project, exchanged their design fees as well. Like the

Mandel and French schemes, the Beaux-Arts Corporation offered preferred stock returning six

percent interest through the first five years. The payment of that interest, however, could be

deferred and redeemed for shares of common stock after five years. No mortgage existed. All

financing was achieved through the sale of stock and we are told that the issue sold out in one day

to investors throughout the United States and in Europe.[134]

By 1929 the level of public participation in real estate investment had reached such

tremendous heights that the real estate investment community made a proposal to create a New

York Real Estate Exchange. The purpose of the Exchange was to provide a single consolidated

venue for the exchange of securities in real estate ventures. It would now be possible, supporters

of the Exchange reasoned, for the bond or stock owner outside of a major American city with

investments in a building in Chicago or New York to have his holdings easily valued, permitting

him to use them as collateral for further borrowing. Organizers of the Exchange, which was to

have opened on October 1, 1929, were forced to abandon their plans by the turbulence and

eventual crash in financial markets which occurred in that year. Yet, the proposal epitomized the

tendency among financial strategists of the building and investment industry to seek larger and

---

[134] Boyd, "Wall Street," AF 50 (May 1929): p.772.

more diffuse markets for investment capital and their willingness to direct building production according to the arbitrary laws of the marketplace.[135]

The Aesthetics of Speculative Building

Architects experienced speculative building as a restrictive domain of practice in which their design methodologies were determined by the commodity nature of buildings. To chronicle this trend, Architectural Forum, perhaps the keenest observer among professional magazines of the growing importance of speculative capital in the construction industry in the 1920s, initiated a special section on building finances in 1928 under the direction of C. Stanley Taylor. In these pages, for example, authors noted the diffuse character of modern patronage brought about by the proliferation of small investors. "Formerly," the architect, E. Simon, noted in an article entitled "Learning the Trends from the Facts," "the typical building enterprise concerned one man or a small group."

> [But]...today almost every building of importance is viewed by a great body of investors. A mistake in building economics seventy-five years ago affected only one enterprise; a mistake in building today reaches far beyond the building into the pockets of thousands of direct investors.[136]

Taylor himself observed that although this patronage was broadly based and anonymous it placed precise demands on professional practice. "It is quite apparent," he wrote in 1928, "that the architectural office will be rendering for their clients a vastly improved service which will include in far greater degree than ever before the protection of the client's investment."[137]

Later that year, Taylor outlined the specific criteria by which the designs for speculative building were judged. Discussing the agenda of analysts who examined plans on the behalf of investors to determine the viability of buildings as investments, he observed that,

> An extremely careful study is made primarily to eliminate two dangerous factors: First, waste space which is uneconomical from the point of view of both owner

---

[135] Boyd, "Wall Street," AF 51 (July 1929): pp. 119ff. Boyd claims that the Exchange was first proposed in 1915.

[136] E. Simon, "Learning the Facts from the Trends," AF 54 (January 1931): pp. 115-16.

[137] C. Stanley Taylor, "Architectural Services from the Business Point of View," AF 48 (January 1928): pp. 113-14.

and mortgagee and second, impractical building construction conditions as imposed by the plan.

Taylor asserted that these analytical interventions had no agenda behind them which would influence the appearance of buildings. "After the plans have been thoroughly analyzed the element of design is given consideration," he conceded. But the object of this examination was not to consider building design "from the aesthetic point of view but primarily from the market aspect."[138]

But although the criterion of maximization may indeed have been unaccompanied by a specific aesthetic formula, it did, nevertheless, establish the primary standard against which any aesthetic formula would be tested. The architect George Hirschfeld, also writing in Architectural Forum, acknowledged that the determinations of the success of some building forms over others were based on quantitative assessments of contained volume and building cost. "Building is no longer a matter of art," he wrote in 1930, "but a matter of area. The question is not how to erect buildings of great artistic excellence but how to erect profitable buildings, i.e. buildings at least possible expense with the largest possible space."[139] John Boyd demonstrated the formal and material implications of these criteria with a proposal for a mixed-use high-rise designed by the firm of Churchill and Thompson which, he claimed, typified the type of building that would be produced through the agency of the New York Real Estate Exchange. Depicted unencumbered by adjacent buildings and thus rising in isolation, the design showed no trace of materials or of the constructional methods employed in its building (fig. 3.49). Rather, through its depiction of towering mass, the proposal portrayed only the volumetric consequences of a design process predicated on maximizing spatial enclosure as a means of producing income on invested capital.

The comments of architects reveal both a resignation to the determinism of investor expectations and a willingness to engage in the task of enhancing the capacity of building production to expand the value of invested capital. James Neuman, an architect working in the office of Buchman and Kahn, described the logic which guided the design of commercial office buildings:

---

[138] C. Stanley Taylor, "The Architect's Position in Relation to Mortgage Financing," AF 48 (May 1928): pp. 761-63.

[139] George Hirschfeld, "To Modernize or to Build?" AF 53 (August 1930): pp. 261-66.

> The natural effort to secure the greatest possible return upon invested capital has
> led to the keenest competition in the development of the plan, as the financial
> return is directly correlated with the efficiency of the plan.[140]

On the one hand, Neuman's words reveal his tacit acceptance of the laws governing these

building/commodities and their movements on the market, exemplifying what the historian, Georg

Lucaks, has called a "contemplative" stance toward a "process mechanically conforming to fixed

laws." Like the individual described by Lucaks who confronted an autonomous and closed world of

"objects and relations," Neuman's words suggest that he too sensed that although he could "use his

knowledge of these laws to his own advantage, he [was] not able to modify the process [by which

they were formed] by his own activity."[141]

On the other hand, Neuman's comments implied that while he and his fellow architects

accepted the expansion of invested capital as the goal and purpose of building production they

were prepared to challenge established methods of design in their quest for productive measures

which better served those ends. Neuman demonstrated the outcome of this process with his firm's

design for the Squibb Building, a speculative building project located in New York City on Fifth

Avenue, in which the architects sought a plan and section arrangement which minimized unusable

space (figs. 3.50, 51). As we have already suggested, few if any incentives existed within the matrix

of selective criteria produced by speculative building for structural variation which did not produce

immediate and tangible economic rewards. The plan, therefore, adhered to a regular structural

grid and avoided space-consuming 'poche' (the pockets of space used typically by Ecole-trained

architects to form rooms with regular geometries) even in its lobby areas and public spaces. In the

receding volumes demanded by the New York Zoning Law the architects also configured their

setbacks to conform to the structural grid.

Advancing arguments similar in spirit and language to those of Neuman, Ely Jacques

Kahn, a principal in Buchman and Kahn, described the design process in which the firm had

---

[140] James Neuman, "Factors in Office Building Planning," AF 52 (June 1930): p. 881.

[141] Newman's words, therefore, suggest that for the architect the laws of the marketplace formed an objective
reality impinging on and determining the nature and substance of his work. Georg Lucaks, "Reification and the
Consciousness of the Proletariat" in Lucaks, History and Class Consciousness (Camb. MA, 1971), pp. 87-88.

engaged for their Park Avenue Building. Asserting the primacy of investment interests in modern

commercial building, he published diagrams drawn by Neuman himself which reduced the building

configuration to a ratio of total volume to rentable area (figs. 3.52, 53). Kahn wrote,

> The height of the building was determined through a table of calculations largely
> affected by the number of passenger and freight elevators serving the various
> floors. The set-back conditions, column centers, standpipe regulations, stairways,
> toilets, and the like, fixed the extent of the service portions and the relation of
> usable space to unproductive area determined reasonably soon at what floor to
> stop.[142]

The Squibb and Park Avenue Buildings offer examples of another priority of efficient

planning: the formation of flexible space. As Albert Kahn observed, investors and developers

prized "Flexible space" which permitted the interior subdivisions to be changed.[143] In his article in

Architectural Record, Ely Jacques Kahn similarly endorsed the importance of flexibility.

> Flexibility of plan is the keynote of success of the new building. Whether or not it
> be designed for some particular individual or concern, or entirely for prospective
> tenants of a type merely anticipated, it is vital that almost any variation of usage
> can be accommodated....This adaptability of plan, the attempt to cover the
> possibilities of location and the extremely rapid shift of population and business
> concentration is reasonable guarantee of a sound investment.[144]

The promise of flexibility was an attractive leasing device because it suggested that the

building could inexpensively accommodate changes in tenant requirements and had spawned an

industry of removable partition manufacturers supplying the occupants of commercial office space

(fig. 3.54). It also signified to the real estate investor that his invested capital was not tied up in a

permanent configuration. In his article on the planning of the Squibb Building, Neuman explained

the attraction of flexibility to the investment community.

> Because the financier is also immediately concerned with the safety of the capital
> funds which are tied up for a period of many years he insists on the utmost
> flexibility of plan so that in case of necessity the building may be rapidly and
> economically converted from one type and occupancy to another. This, in
> common parlance, means safety of investment through diversification.[145]

In response to this agenda, the architects of the Squibb Building devised three sets of

plans using the same floor plate as a means of demonstrating to the owner that the building's use

[142] Ely Jacques Kahn, "Economics of the Skyscraper," AR 63 (April 1928): p. 298.

[143] Albert Kahn, "Designing Modern Office Buildings," AF 52 (June 1930): pp. 775-77.

[144] E.J. Kahn, "Economics of the Skyscraper," pp. 298-301.

[145] Neuman, "Factors," p. 881.

could vary to accommodate different functions, from office space to retail space. They made these within the same structural grid and floor to floor height (fig. 3.55). The insistence on flexibility in the use and layout of spaces swept away the design canon central to the pedagogy of the Ecole des Beaux-Arts that predicated the design process on the architect's interpretation of a building program.

Architects did occasionally struggle against the latent determinism of optimized structural planning in order to achieve variations in form. But their ability to depart from established norms of materials and structural layouts was limited by their ability to discover new spatial configurations that produced equally "efficient" results. Raymond Hood's effort to vary the floor configuration of his Daily News Building completed in New York City in 1930 offers an example (figs. 3.56, 57). As was frequently the case, the owner assembled a team of "experts" to determine the size and spatial arrangement of the newspaper headquarters. Early on in the design process, according to Kilham, Hood proposed that an office tower be added to the original program for printing facilities in order to generate income on the land and building investment. The plan of the tower called for a "wing" projecting from the rear of the elevator shafts with a corridor down the center of the space and rental offices on either side. Kilham notes that the most satisfactory solution to the spanning problem was to divide the space into three equal bays which would permit similarly dimensioned beams. But, this strategy, despite the attraction of repetitious framing to builder and engineer, left a column line in the office space. In order to eliminate this, Hood struggled to incorporate a modest innovation in the structuring of this area of the plan by reducing the number of bays to two and locating the middle column off center in a corridor wall. Kilham claims that Hood was only permitted this concession after he showed that by cantilevering the transverse beams running from outer wall to the center column line it would be possible to use beams of similar length.[146]

Just as unusable space was perceived to result in a loss on the investment in building so too did the application of excess ornament imply waste. As Charles Lench, author of The

---

[146] Kilham, p. 96.

Promotion of Office Buildings (New York, 1932), noted, "[the architect] must clothe his building in a dress acceptable to the bankers. Design which needs for its expansion elaborate and expensive ornamentation is frowned upon."[147] Yet, despite the resistance to expensive ornamentation, the strategies for marketing highrise loft, apartment, and office buildings to both investors and future tenants placed great weight on the ability of the buildings to inspire the appropriate public perceptions. These towers, the boosters emphasized, represented new investment opportunities and offered new conveniences in their layouts which made them superior to the buildings they replaced. "The public seeks new, modern, convenient office space, just as it seeks the new, the modern and the convenient in homes, automobiles and all its wants," William Starrett wrote in 1928.[148] To convey this message architects engaged in a systematic effort to invent a new visual vocabulary that sustained the image of novelty proffered by highrise boosters.

Out of these two agenda there arose a conflict: at the same time that architects were encouraged by successful marketing strategies of highrise building to seek out visual novelty they were compelled by the scrutiny of investors to achieve the maximum enclosure of space. As a result, the strategies of variation in the appearance of these buildings were limited, as Manfredo Tafuri has observed, to inexpensive and superficial motifs which did not conflict with the regularity of the structural configuration or the efficiency of the plan.[149]

These competing agenda produced a characteristic timidity in the designs of speculative building for which architects sought visual novelty that did not, at the same time, challenge the logic of maximizing volume or optimizing structure. The Beaux-Arts Apartments offers an example. Completed between 1930 and 1931, the buildings were straightforward in plan, containing over 800 apartments within two large building volumes opposing one another across the midtown Manhattan street (figs. 3.58, 59). The units themselves consisted primarily of voguish studio apartments. The apartment blocks were modestly recessed at their center portions, creating

---

[147] Lench, p. 50.

[148] W. Starrett, Skyscrapers, p. 121.

[149] For example, Tafuri writes, "the years from 1923 to 1932...were characterized by a proliferation of formal themes and linguistic references, which were generally divorced from structural problems." Tafuri, "Disenchanted Mountain," pp. 448-41.

a sense of closure where their ends were aligned with the street edge. Contrasting with the vertical emphasis at their ends, Hood and Murchison, the principle designers, applied a horizontal striping set in a dark reddish brick whose height corresponded to that of the window units used in the two complexes. Combined with a zig-zag patterns at the ground floor, this horizontal motif revealed the design's inspiration in Parisian Art Deco (among other stylistic sources) and its cosmopolitan pretensions reinforced the trendiness of the studio apartment concept (figs. 3.60, 61). This imagery, calculated as Walter Kilham has noted to respond to market trends, was carried further by the marketing schemes devised by the management company that included a newspaper, motorbus service and doormen dressed, characteristically, as French 'gendarmes.'[150] The efforts to draw superficial associations between the Beaux-Arts Apartments and fashionable, cosmopolitan lifestyles continued in the early thirties when the management group sponsored a solo flight by the flying ace, J.E. Boyd, to Haiti in order to attract press coverage and a larger constituency for its apartments in the flagging economy (figs. 3.62, 63).

Architects devised other strategies by which to alter the perception of these buildings without substantially interfering with the structural or formal resolution of the building volumes. Artificial lighting had been widely used to highlight tall office buildings since the beginning of the 1900s. But, after the completion of Raymond Hood's American Radiator Building in 1924, a structure whose black brick skin and gold finials gave the impression of a hovering crown at night, architects were drawn to more dramatic and illusionary solutions.[151] Three years earlier, Ben Lubchez had also noted the utility of "optical illusions" in the formation of a design strategy for modern highrise buildings in an article describing the method and effect of imagery in the European thriller, "The Cabinet of Doctor Caligari." Lubchez observed four "artifices" used to produce the illusions of depth and relief on two dimensional surfaces that he felt could be applied to the large and ponderous masses characteristic of new urban architecture (figs. 3.64, 65, 66,

---

[150] Kilham, p. 103.

[151] We will consider this building in greater detail in the final chapter.

67).[152] Harvey Wiley Corbett exploited these "artifices" identified by Lubchez in his later work. As Rosemary Bletter has observed, Corbett varied the color of brick in the his Masters Apartment Building, using darker shades at the bottom and lighter shades at the top, and incorporated jagged profiles to yield the impression of additional height (fig. 3.68).[153] Similarly, in his much publicized commercial highrise at Broadway and 39th Street in New York City, Ely Jaques Kahn articulated the volume of his building with a dramatic vertical stripping and pier-like shafts which formed a variegated profile against the sky (figs. 3.69, 70). Judging by a rendering prepared by Kahn's office and reproduced in Sheldon Cheney's book, New World Architecture (New York, 1930), Kahn intended these incessant verticals to diminish the sense of closure and finality imparted by the horizontal lines of cornices and roof planes. The rendering, in particular, demonstrates the proximity of Kahn's decorative scheme and the "optical illusions" offered by Lubchez. Such strategies for treating commercial buildings proliferated throughout the late twenties and produced the motifs characteristic of the American Art Deco and the so-called "Skyscraper Style."

These varied effects were bound by several common features. In their visual newness, they dramatized the novelty with which developers and real estate promoters could legitimize the constancy of renewal of urban real estate and generate enthusiasm for the investment opportunities that renewal promised. At the same time, these strategies were not intrinsic to the fabric of the building. Instead, they derived their impact from illusions of varied mass and volume which concealed the utter regularity and stability of the constructional fabric out of which they were formed. In contrast to the formal variety implied by the illusion of attenuated forms, architects conceived these buildings as simple volumes enclosing space.

The conflict between the demands of marketing and the rule of maximizing enclosed and usable space manifested itself in a subtle paradox that architects failed to fully resolve which pitted the imagery of the tall building as a dramatic composition of mass against the interpretation of the tall building as a container of volume. The sculptor Leo Friedlander imagined the tall building as a

---

[152] Ben Lubchez, "The Cabinet of Doctor Caligari." AIAJ 9 (1921): pp. 213-15. Lubchez identified these "artifices" as the exaggeration of gradation and contrast in light; the exaggeration of perspective; the distortion of perspective; the maladjustment of scale.
[153] Rosemary Bletter and Cervin Robinson, The Skyscraper Style (New York, 1975).

solid volume into which the architect as "Master Sculptor" had carved. As examples, Friedlander chose several prominent towers with which to compare his own sculpture for a "Symbolic War Monument" including Harvey Wiley Corbett's Bush Tower (figs. 3.71, 72). Friedlander's choice is revealing insofar as Corbett's illusionary devices in the party wall (which incorporated two tones of brick in order to simulate the play of light on a projecting pier) demonstrated the tenuous association of this building form with a sculptural volume, emphasizing instead the flatness of the building surface and the superficiality of this motif.

In contrast to Friedlander, architects tended to portray the tall building as a volumetric enclosure in their renderings of its form. Before World War I, Corbett had advocated a model building technique which used flat sheets of cardboard to form the simple volumes characteristic of the highrise form instead of modelling clay (figs. 3.73, 74). Moreover, as is suggested by both Corbett's image of the Bush Tower superimposed on its context and a series of renderings of an urban highrise building prepared by the Starrett Building Company in the late 1920s, architectural depictions frequently emphasized a building's volumetric occupation of the city's territory and revealed the calculated neglect of urban space-making (figs. 3.75, 76). Likewise, Yasuo Matsui's interpretive isometric drawing of a commercial highrise which William Starrett included in his 1928 autobiography depicted the envelope as the residue of two primary factors: its exterior contours were defined by the New York City Zoning Ordinance and its internal configuration was limited to the simple and efficient stacking of floors (figs. 3.77, 78). Showing the building, as Starrett noted, "without regard to design or fenestration," Matsui reproduced this abstract and reductive view, demonstrating the exclusion from the design process of material, structural and urbanistic considerations.[154]

Equally revealing is the comparative drawing by Yasuo Matsui that appeared in Thomas Adams', The Building of the City, (NY, 1931) in which Matsui depicted the ascending and evolutionary order of tall structures (fig. 3.79). In each depiction, Matsui, who worked as an architect with both Starrett Brothers Construction Company and the architectural firm of Starrett

---

[154] W. Starrett, Skyscrapers, p. 121.

and Van Vleck, represented the building surface schematically, as a grid of windows and ornamentation. Beneath that exterior he relied on horizontal lines to represent the vertically stacked and repetitive space contained between floors. In this diagrammatic view, Matsui showed his familiarity with the prevailing interpretation of highrise buildings as containers of volume and ignored their material and techtonic character. Extending this interpretive mode he resolved even to leave out the massive arches and ignore the structural virtuosity of the Eiffel Tower, a building which in a programmatic sense was ill-matched with the highrise buildings with which it appeared. Unable to participate with these towers in their containment of space, the Parisian tower was depicted by Matsui as void in that portion of the drawing where the other buildings are shown with stacked floors. Only by drawing the open trusswork of the tower as a linear pattern and thereby erasing the tower's techtonic expressionism could Matsui convincingly demonstrate an equivalence between this and the other structures.

It should also be noted that the demands of speculative building in the 1920s had an equally important impact on the development of designs for housing. Articles discussing the contributions which architects might make to speculative ventures in the building of single family housing often emphasized the degree to which the architect could help the developer increase his profits through economical layouts of both subdivisions of land and building plans. In an article appearing in 1928, the architect George Root suggested that the architect's services were most helpful in allowing the builder to "get the most out of the possibilities for development." Root clarified his assertions.

> When large acreage is purchased for development as well as when one house is
> contemplated the architect can serve his builder client to the latter's advantage --
> yes monetary advantage -- even from the start of the operation.[155]

The examples which Root showed of houses designed by architects were traditional. For him, this aesthetic decision followed logically from the perception among lenders that unlike highrise building, housing markets did not respond to visual novelty (fig. 3.80). Taking Root's explanation to be accurate, one may conclude that instead of producing stylistic change as it had in the highrise

---

[155] George Root, "Can the Architect Serve the Speculative Builder," AF 48 (January 1928): p. 126.

commercial building, investment capital applied to the production of housing raised impediments to visual novelty.

Numerous architects did attempt to introduce aesthetic, technical and production innovations into the housing field in order to reduce the cost of housing and resolve the problems of "mass housing." In 1926, Henry Wright recommended that housing be developed with the same rationality with which Ford had redesigned his Model T and developed the Model A.[156] Other proposals followed: Robert Tappan produced the first house using steel studs in 1927.[157] In 1929, Buckminster Fuller presented his first proposal for "A House for Mass-Production" which was self-contained and came with all appliances installed (figs. 3.81, 82).[158] In 1931, Norman Rice demonstrated "Battledeck" framing, a system of industrially produced corrugated steel sheets which could be used to frame walls and floors.[159] In the same year John Burchard introduced his concept for modulor construction which relied on standardized steel frame with wood joists covered with Portland Cement panels, a system that permitted large prefabricated units to be employed.[160] A year later, Irving Bowman proposed a building system consisting of large pre-assembled structural units which allowed a flexible pattern of design[161]; and Howard Fisher began production of the prefabricated homes by his company, General Houses, whose name he had intentionally modeled after General Motors.[162] In 1931, Architectural Forum ran an article by Walter Gropius on his proposals for prefabricated small houses (fig.3.83). But when it came to showing what Forum imagined as serious designs for American single family housing, it -- like Root -- presented traditional styles (fig. 3.84). Even the mass-produced houses developed by Foster Gunnison in the 1920s and backed by General Electric and American Standard were pitched roofed and bore shutters. Among the few popular efforts to introduce modern designs

[156] Henry Wright, "The Six Cylinder House with Streamline Body." AIAJ 14 (April 1926): pp. 175-78. Wright did not recommend that housing be mass-produced, but rather that it be designed with the same attention as the automobile.

[157] Gilbert Herbert, The Dream of the Factory Made House (Cambridge, MA, 1984), p. 224.

[158] Buckminster Fuller "A House for Mass-Production," AF 51 (July 1929): pp. 103-4.

[159] Norman Rice, "Small House Construction: A Problem to be Solved." AF 55 (August 1931): pp. 217-22.

[160] John Burchard, "Materials for Mass-Production," AF 55 (October 1931): pp. 507-14.

[161] Irving Bowman, "An Industrial Approach to Housing," AF 57 (July 1932): pp. 73-79; (October 1932): pp. 371-80.

[162] "A Product of General Houses," AF 57 (July 1932): pp. 65-72.

were those supported by retailers with a publicity agenda. In 1933 the department store R.H. Macy sponsored the architects Raymond Hood, Harvey Wiley Corbett, Ely Jacques Kahn and others to produce their versions of the so-called "Forward House" (figs. 3.85-90). But the store's motivation for these designs was primarily to provide a suitable backdrop for its promotion of modern household commodities.

Building Production and the Limits of Architectural Design

With their attention riveted on the productivity of the building industry, architects expressed conviction in the view that the structural principles and building methods they manipulated through architectural design were merely the means to achieve faster construction and more effective spatial enclosure. "It is easy to think of structure in design as being of larger moment than it actually is," the prominent New York architect, Ralph Walker, observed in an article entitled "The New Architecture," which appeared on the first page of the January issue of Architectural Forum in 1928. Instead, he continued, "it should be thought of as having but this one function -- to span the space desired and to span it economically, whether beautifully or not."[163] Walker's direct and utilitarian approach had been praised by Lewis Mumford and Herbert Croly in its application in the headquarters of Bell Telephone, the so-called Barclay Vesey Building, completed between 1923 and 1926. Mumford had called the building "cold and hard" as a result of its "disclosure" of the constraints of site, program and budget. As the building's designer, Walker took, in Mumford's words, "the mass of the building as irremediably "given" [and] sought to modify its great sobriety by [his] treatment of details."[164] But in his later work, Walker reproduced these craggy profiles as appendages to less articulated building volumes. A construction view of his project for Bell Telephone's New Jersey facility demonstrates the straightforwardness of his method (fig. 3.91). Conceived as a simple volume whose interior was subdivided by a cellular grid

---

[163] Ralph Walker, "A New Architecture," AF 48 (January 1928): pp. 1-4.

[164] Lewis Mumford, "Barclay Vesey Building," New Republic (6 July 1927), reprinted in Ralph Walker, Architect (New York 1957); Herbert Croly, "New York Skyscrapers," AR 61 (April 1927): pp. 374-75.

219

wrapped with a thin masonry exterior, the building typified steel frame construction and expressed

the utility of the frame to produce enormous constructions by simple extension of its basic module.

In developing his thesis, Walker must have been aware of the divergence of his thinking

from that of Frank Lloyd Wright whose articles entitled "In the Cause of Architecture" appeared in

Architectural Record throughout 1927 and 1928. In contrast to Walker, Wright criticized the

inability of architects to engage the building structure as more than a mere artifice of enclosure.

Instead, he stated that their task was to cull out the inner logic of modern production methods

concealed behind the distracting cloak of "Mammon" and express it architecturally so as to yield to

the building a "natural" and "organic" quality. Like Behrendt, Wright insisted that the building

must have a formal character that revealed the "intrinsic" form of its structure and materials.[165]

In his designs for a highrise that he claimed to have first developed in 1923, Wright

offered a compelling alternative to Walker's New Jersey Telephone Building (figs. 3.92-95).

Whereas Walker had produced a design for a building whose fabric was uniform and reproducible,

Wright's work revealed salient distinctions between, for example, the exterior walls in copper and

glass which enclosed the volume and the reinforced concrete pylons and cantilevered slabs which

supported them. In plan and section, the concrete "pylons" formed a regular but inflected

structure. In contrast to this thick and monolithic concrete structure, Wright designed a veil-like

cladding system composed of prefabricated metal and glass panels which "cease to exist as either

weight or thickness." Unlike the generic grid supporting Walker's cubic form, Wright's pylons

passed through the building volume and emerged above to become an important visual component

of the exterior of the building. The cantilevered concrete slabs passed to the exterior of the

"screen" of cooper and glass, appearing, as Wright explained, "at intervals, in the recessions of the

screen in order to bring the concrete structure itself into relief in relation to the screen as well as in

connection with it." Wright's efforts to depict material and structural uniqueness suggests a

rebuttal to Walker wh… ew Jersey Bell Building was merely produced through the agency of

[165] Frank Lloyd Wright, "In the Cause of Architecture, II: Standardization - The Soul of the Machine," AR 61 (June 1927): pp. 478-80.

modern building methods. Affirming his position, Wright wrote, "why should not the structural

principle be expressed artistically as well as scientifically for its own sake."[166]

In contrast to Wright who continued to express conviction in the primacy of "artistic"

vision in the design process, many professionals insisted on the virtues of collaboration with other

experts with whom their work coincided. The New York firm of Shreve and Lamb proudly

revealed that they had completed their drawings for the R.J. Reynolds Headquarters located in

Winston-Salem, North Carolina, in five months due to their coordination of work schedules with

engineers and manufacturers (fig. 3.96).[167] Pursuing the pattern of thinking epitomized by this

early work, Richmond Shreve later described the design process as fundamentally managerial,

involving the coordination of expert information. Shreve wrote,

> The group engaged in such an important operation should constitute a "Board of
> Directors" upon which should sit the owner supported by his bankers and real
> estate agents, the architect in company with his structural and mechanical
> engineers and the builder whose subcontracting and material supply associates
> form time to time assist in the discussion of special problems.[168]

The example of Shreve's firm is appropriate for it was they who -- in concert with Starrett

Brothers Construction Company and a host of other professional experts -- devised one of the

most sensational building projects in the late twenties. Initially proposed as an industrial loft

building to be called the Waldorf-Astoria Building after the hotel that was formerly located on this

site, the project for the Empire State Building was taken over by a group of investors publicly

represented by former New York State Governor, Al Smith. Having selected Shreve's firm and

Starrett Brothers at the same time, the group established the priorities of speed of construction

and profitability as the determining factors in the design process.[169]

The schemes first prepared by the architects called for a loft building shorter than that

which was ultimately built (figs. 3.97-100). But Smith and his associates overturned this strategy

[166] Frank Lloyd Wright, "In the Cause of Architecture, VII: Sheet Metal and a Modern Instance." AR 64
(October 1928): pp. 334-42; Wright, "In the Cause of Architecture, III: Steel" AR 62 (August 1927): pp. 163-66.
[167] "Utilization of Working Schedules in Office Practice," AA 133 (5 May 1928): pp. 603-12.
[168] Richmond Shreve, "The Empire State Building Organization," AF 52 (June 1930): pp. 773.
[169] Shreve and Lamb became involved when Jacob Raskob brought them in touch with the development
group in 1928. Adolf Placzek, MacMillan Encyclopedia of Architects (New York, 1982), s.v. "Shreve, Lamb and Harmon,"
p. 54.

opting instead for a scheme with great height, a smaller floor area to limit the building's depth and reduce the distance from offices to exterior walls and a simple profile to facilitate construction (figs. 3.101-103).[170] "The fundamental fact of the design was simplicity," Paul Starrett later wrote, "a straight shaft rising with a few setbacks from the sixth to the eighty-fifth floor." The ultimate height, he noted, was determined by the available financing. "In other words," he concluded, "the height, the beauty of the Empire State building, rose out of strictly practical considerations."[171] Shreve concurred with Starrett's assessment, noting that the whole process was determined by the constraints of time, money, and zoning restrictions.[172]

The effect of these constraints registered themselves in the regularity of the structural system (figs. 3.104-106). The layout of the floor plan relied on a regular column grid maintained throughout the height of the building. Even the setbacks corresponded to the grid. Thus, the designers were able to avoid the possibility of columns at the perimeter of upper floors coming down in the middle of the span of the beams supporting the ceiling and roof of the floor below, eliminating the problem of point loads which required deeper beams than those supporting evenly distributed loads only. The regularity of the grid also facilitated the production of steel drawings because it insured that the span dimensions and connections were similar from one floor to the next. Moreover, to accommodate different loading conditions between lower and upper floors the column sizes were varied when possible by the addition of reinforcing plates to standard members (figs. 3.107, 108).

These measures permitted a savings in the time required both for the production of structural and shop drawings, the manufacture of steel members as well as the erection of the frame. J.L. Edwards, a representative of the structural engineering firm of H.G. Balcom, noted that their drawings required two months for completion and the framing took only five months.[173]

[170] Arthur Loomis Harmon, "The Design of Office Buildings," AF 52 (June 1930): p. 819; William Lamb, "The Empire State Building, VII: The General Design," AF 54 (January 1931): pp. 1-8; Richmond Shreve, "The Empire State Building Organization," AF 52 (June 1930): pp. 770-74.

[171] P. Starrett, Skylines, p.296; see also Harmon, "Office Buildings," p. 819.

[172] Shreve, "Empire State Building Organization," pp. 770-74.

[173] J.L. Edwards, "The Empire State Building, III: The Structural Frame," AF 53 (August 1930): pp. 241-46.

"Never before in the history of building," Starrett concluded, "had there been...an architectural

design so magnificently adopted to speed in construction."

> Given this design, our job was that of repetition -- the purchase, preparation,
> transport to the site and placing of the same materials in the same relationship
> over and over. It was, as Shreve the architect said, like an assembly line -- the
> assembly of standard parts.[174]

In order to maintain the speed of the building process it was necessary for the participants

to coordinate their activities. To this end, Balcom devised a scheduling system which established

critical deadlines for their work, the work of the architects, and steel fabricator (figs. 3.109, 110).

The architect and contractor also developed a scheduling system which keyed the production of the

architects' drawings into the construction process. Starrett Brothers introduced innovations in the

organization of work on the jobsite as well. On a managerial level, they instituted a clear chain of

command among their staff facilitating the flow of authority (fig. 3.111). They experimented with

mechanical innovations, installing, for example, a rail based carting system integrated with

construction elevators that sped the delivery of materials from the ground to the upper floors of

the building (figs. 3.112-116). They contracted with a local restaurateur to operate canteens at

twenty floor intervals to eliminate the necessity for the construction worker to leave the site for

food (fig. 3.117). These methods resulted in a record-setting construction pace allowing Starrett to

complete one floor each week and to finish the building in one year.[175]

These innovations on the construction site and during the building process followed a

pattern of coordinated work established at the outset of the project. From the moment they began

work on the design, the architects sought out and integrated the advice of the engineers,

contractors, their work crews, and material suppliers on means of improving the speed and

lowering the cost of construction. For example, they developed their design of the exterior skin of

the building, characterized by its alternating flutes of stone and projecting window bays, according

to two strategies (fig. 3.118). First, the design team decided to support the stonework directly on

the spandrel beams and endeavored to reduce the thickness of the masonry veneer (figs. 3.119,

---

[174] P. Starrett, Skylines, pp. 295-96.

[175] Shreve, "Empire State Building Organization," p.773; P. Starrett, Skylines, pp.295-6; John Cormody, "The Empire State Building, X: Field Organization and Methods," AF 54 (April 1931): pp. 495-506.

120). By eliminating the usual shelf angles it was possible for the structural steel drawings to be completed before the exact configuration of the masonry and glass curtain wall had been resolved. The thinness of the skin and the absence of deep protrusions also made it possible to avoid counterbalanced stonework.[176] Starrett observed that, "The result of combining designing of steel and stone was a reduction of the quantity of stone to one cubic foot for every 200 cubic feet of building whereas most buildings curtained with stone have four times as much."[177] Second, by placing the windows in the vertical plane of the spandrel and out beyond the face of the masonry, the design team was also able to eliminate the difficult transitions of plane which exist at windows recessed into the wall: the window units stacked on top of the spandrel panels beneath them (figs. 3.121). Moreover, the separation of stone piers from the window bays permitted the masons to work independently from the work crews installing the prefabricated metal units. Shreve wrote of the process that care had been taken to insure "material independence to provide in every way for entire independence of manufacture and erection,"

> ...[and] where the elements were necessarily interrelated to arrange so that the placing of any one group once started might proceed freely without being held up by another...the spandrels and trim were designed to be fastened in place independently without any structural connection between the two.[178]

On their interiors, these bays concealed the compartments for radiators equipped with pre-formed plaster stops that simplified the placement of the wall finish (figs. 3.122, 123). Shreve later observed that the isolation of elements -- each designed to receive adjacent materials and each suspended independently from the steel frame -- anticipated the next advancement of prefabricated window/spandrel/radiator units capable of being installed in one piece.[179] It should also be noted that the spandrels, which were fabricated of sandblasted aluminum, represented one of the first uses of the new non-corroding material and marked the beginning of the Aluminum Corporation of America's ascendence within the building material industry.

[176] P. Starrett, Skylines, p. 298.

[177] Ibid., p. 297.

[178] Richmond Shreve, "The Empire State Building, II: The Window-Spandrel-Wall Detail in its Relation to Building Progress." AF v. 53 (July 1930) pp. 97-104.

[179] Ibid., p.

Functional planning, the elimination of excessive ornament, the use of standardized building components and patterns of work and the effective management of labor each contributed to the savings of time and money. Starrett was proud that he was able to deliver the building $2,000,000 under the budget (in part a consequence of low labor and material costs during the depression). But the fetish for precision in the organization of industrial processes only exacerbated the dilemma caused by the rationalization of construction technology which Frank Lloyd Wright had identified in his articles, "In the Cause of Architecture." Having broken down the process of making these buildings into discrete and autonomous tasks such as in the distinction between the masonry and the window/spandrel units, Shreve, Lamb and Harmon together with the other "experts" with whom they were allied rendered the goal of the work process intangible. Similarly, Arthur Loomis Harmon acknowledged that the interiors of office buildings did not involve any decision-making on the part of the designer because they were determined solely on the basis of an optimal relationship between efficient spanning and efficient office dimensions.[180] Only the exteriors demanded the designer's attention and these, as we have seen, were largely controlled by the aspiration for efficient production.

The lesion of work and object was increasingly apparent in the few elements which the architects consciously designed: the bulbous and continuous curves of the Empire State Building's mast, intended in a spirit of fantasy as the mooring for dirigibles, contrasted with the spiky silhouette of its frame, obscuring the material and techtonic value of the building and eliminating any reference to its constructional scale (figs. 3.124, 125). Having lost the sense of their "craft" as designers and having abandoned the quest for what Wright had called the "intrinsic" quality of the object, architects relegated their work, as Sheldon and Martha Cheney would later observe, to the status of industrial design, merely arranging preformed components in an expeditious manner and according to the criterion of efficient production (fig. 3.126). Aptly summing up the period, William Lamb wrote in 1931 that "[a]n interesting development in the planning of present day office buildings is the change in the conception that the architect had of his work."

[180] Harmon, "Office Buildings," p. 819.

The day that he could sit before his drawing board and make pretty sketches of decidedly uneconomic monuments to himself has gone. His scorn of things "practical" has been replaced by an intense earnestness to make practical necessity the armature upon which he molds the form of his idea.[181]

In cities throughout the United States construction on a few of the large commercial structures begun in 1928 and at the beginning of 1929 continued on after the stock market crash in October of that year and offered conspicuous points of activity in otherwise silent downtown areas. Those that were completed came to represent the era in its aspiration for bigness, speed and a persistent disregard for the dilemmas of overproduction.[182] But, while the economic and political reforms initiated under Roosevelt substituted governmental sponsorship for the private patronage which had flourished under his predecessors, his New Deal still prioritized big, efficient construction. Indeed, the New Deal strengthened the arguments which legitimized maximization on the basis that it served a social purpose. In 1931, the Architectural Forum under the leadership of Kenneth Stowell endeavored to produce a "Plan for the Building Industry" in which it advocated "cooperation" between architects and other experts in the construction industry just as had the AIA's Post-War Committee a decade earlier and attached this model of work to the emerging agenda of social planning advanced by New Dealers. "The objective of the plan for the building industry," Stowell wrote, "may be summed up as: the building of cooperative effort in the production of better buildings to fulfill real needs scientifically determined."[183] Thus, the rational management of the building industry was tied to the aspiration for comprehensive societal planning.

Stowell continued in the following months to outline the role of the architect under these circumstances.

[I]t would seem the prime function of the architect is to coordinate the efforts of all the factors in the building industry to one common end -- the production of buildings that serve the various needs of society in being functionally efficient, economically sound and aesthetically satisfying.

---

[181] William Lamb, "Empire State Building, VII," p. 1.

[182] In New York, Rockefeller Center, the Chrysler Building, the Daily News Building and the Empire State Building were all completed after 1929. In Philadelphia, the PSFS would not be finished until 1932. In Cinncinati the Starrett Brothers-financed Carew Tower was under construction in 1930. In Los Angeles, the Eastern Columbia Building by Claude Beelman had been just completed in 1929.

[183] Kenneth Stowell, "A Preliminary Plan of the Construction Industry," AF 55 (August 1931): p. 126.

Stowell assured his readership that the architect's commitment to the rational coordination of the

building industry would produce a viable mode of "professional service." This, he concluded,

required a thorough transformation of the architect into an "executive" managing the various

experts collectively engaged in building. Calling on schools to change their curricula, he noted,

> There appears to be an opportunity for the architecture schools to train
> architectural executives who will be better able to accept the responsibilities of
> leadership and the wider function which the present status of the industry
> demands.

Thus, Stowell called upon architects to perform the same modes of work which they had assumed

in the previous decade as organizers of an industry and as expert/collaborators in the management

and direction of building production.[184]

One other post-depression example of the momentum of the construction industry

deserves our attention because of what it suggests about the persistence of the architectural values

that emerged in the late 1920s. Officially initiated in 1927 as an international fair celebrating one

hundred years of Chicago's history, the planning for the "Century of Progress International

Exposition" (CPIE) passed through the tumultuous economic decline which originated in the 1929

depression and opened, after four years of doubt, in 1933. Having chosen as their theme scientific

progress and the growth of technology since the founding of the city, the exposition organizers

committed themselves to demonstrating the capacity of industry to produce commodities that

entered into and transformed the lifestyles of normal Americans.[185] But, in the midst of the

collapse of consumer-oriented commercial markets, the exposition's opening best portrayed an

unyielding industrial utopianism still endorsing a fading consumer culture.

To accomplish the task of designing the exposition grounds, the organizing committee

selected from among the best known American architects. Their first two choices, however,

seemed at odds with one another. On the one hand they chose the teacher and architect, Paul

Cret, whose reputation still rested firmly on a body of work that recalled the traditions of axial

---

[184] Kenneth Stowell, "Editorial," AF 54 (April 1931): p. 439.

[185] Thus, rather than focusing on the powerful manifestations of industrial technology in gargantuan machinery or the powerful forces they unleashed, the exhibitions — devised with the assistance of the politically conservative National Research Council — focused on those technologies and industrial processes which resulted in new commodities that changed the pace and scope of the modern lifestyles.

planning and stylistic eclecticism inspired by the Beaux-Arts; and on the other hand, they chose

Raymond Hood, the noted New York architect, whose most important projects were highrise

buildings representative of the "New Architecture."[186]

It was largely at Hood's insistence that the Architectural Committee finally selected an

asymmetrical layout (figs. 3.127, 128). Thus, it appears that Hood, who within the following two

years would publicly commit himself to a design canon that prioritized efficient performance over

formalism, dominated over the other architectural commissioners who had advocated conventional

modes of planning based on axial arrangements of buildings interspersed with large open courts.[187]

Moreover, Hood's initial inspiration for an asymmetrical plan came as a consequence of his desire

to participate in the emerging debates which pitted "modernists" against "traditionalists" and to

challenge the authority of the planning conventions based on axial arrangements of buildings.[188]

But by 1930, members of the Architectural Commission acknowledged that the informality of an

asymmetrical arrangement gave them greater flexibility in the design of the pavilions. In the wake

of the depression and confronted by uncertain participation, the asymmetrical scheme permitted

them to key decisions about what and how much to build to the requests for space made by

exhibitors.[189]

Given these conditions for its development, it is not surprising to find that Hood's

proposal would itself be reconfigured several times before the exposition opened in 1933 in

response to the changing economic situation. Whereas the final site plan approved by the

---

[186] In the late 1920s, architects acknowledged that the demands placed on them by clients building commercial buildings for profit prioritized visual novelty. This trend they referred to in a variety of ways including "Modern Architecture" and the "New Architecture." See, for example, Leon Solon, "Modernism in Architecture," AR 60 (February 1927); Ralph Walker, "A New Architecture," AF 48 (January 1928): pp. 1-4; Raymond Hood, "The Spirit of Modern Art," AF v. 51 (Nov. 1929): pp. 445-8.

[187] On Hood's approach to design and his proclaimed commitment to the development of architectural form through a careful response to program see Raymond Hood, "The News Building," AF 53 (November 1930): pp. 530-32. On the site planning proposals by the Architectural Commissioners of the Exposition see the following chapter.

[188] Hood made his decision to propose an asymmetrical scheme while on a trip to Europe and asked several American students at the Ecole des Beaux-Arts to develop a plan he had sketched out. Given the European context for Hood's work and his previous interest in the work of the European modernists especially Le Corbusier, it seems likely that he drew inspiration, as Robert Stern has suggested, from Le Corbusier and the De Stijl Movement. See Robert Stern, "Raymond Hood: Pragmatism and Poetics in the Waning of the Metropolitan Era" in Stern, Raymond Hood (New York, 1982), p. 20.

[189] For a discussion relating the design of the fair grounds to the economic conditions created by the depression see Louis Skidmore, "Planning and Planners." AF 59 (July 1933): p. 30.

Architectural Commission contained a dominant central feature combining a large tower activated

by water and light, the ultimate configuration of buildings was both more modest and less focused,

consisting of six primary pavilions erected by the exposition organizers and a host of privately

financed exhibitions and pavilions (figs. 3.129, 130).

In order to meet the demands of the precarious economic situation by lessening the cost

and speeding the fabrication of pavilions, the Exposition organizers developed their own

constructional standards. The Works Department of the Exposition, charged with producing

construction documents and supervising the construction of the pavilion designs developed by the

Architectural Commission, also produced a special building code that permitted the Department

to adopt less stringent safety factors in their construction than were used in the City of Chicago

and to exploit novel building methods which had not yet been approved by city inspectors.[190]

Forming a separate Building Code Commission headed by Melville Chatten, a partner in the

prominent Chicago firm of Perkins, Chatten and Hammond, and George Wallace Carr, a former

partner of George Nimmons in the firm of Nimmons and Carr, the exposition administration

devised higher live load tolerances and constructional methods that facilitated the dismantling of

the pavilions when the fair was concluded. This strategy also required the formation of a separate

group of supervising insurance companies who agreed to underwrite the project on the basis of the

new code.[191]

Two young architects -- Louis Skidmore and Nat Owings --were particularly influential in

the development of the exposition and facilitators of its building production. As Chief of Design in

the Works Department and Secretary to the Architectural Commission, Skidmore was responsible

for organizing the work of the Architectural Commission. But, Skidmore also proved to be a

tireless promoter and orchestrated a variety of corporate gifts to the exposition administration

which greatly helped the building process.[192] Owings, who worked with Skidmore in the Works

---

[190] This was permissible in the State of Illinois which had no building code because the Exposition grounds
were located on state land and were therefore exempt from the ordinances which applied in the City of Chicago.
Nathaniel Owings, "New Materials and Building Methods for the Chicago Exposition," AR 71:4 (April 1932): pp. 279-89.
[191] "Building Code Commission," CPIE UIC folder 6-15.
[192] On Skidmore's work see Lenox Lohr, Fair Management: The Story of the Century of Progress (Chicago,
1952), p. 114; and Nathaniel Owings, The Spaces in Between: An Architect's Journey (Boston, 1973), p. 51.

Department, coordinated the development of structural and constructional methods which reduced costs and time necessary for construction.

Writing in professional publications, Owings reported on the systems which the exposition's Works Department had devised and on the analyses by which the department had made its selections of materials. The basic structure, he advised, was a light steel frame clad with a variety of industrially produced panels ranging from a cementitious material to gypsum board, steel, and wood (figs. 3.131-133). These were most often attached to a light metal or wood stud system which stood outside of the primary steel frame on a perimeter foundation supported by piles (figs. 3.134-136). On the interiors, wall surfaces were clad with similar sheets applied to the stud system.

In contrast to the massive, formally varied and heroic structures which typified earlier expositions, this building system was remarkable in its lightness (an advantage in this location where the majority of buildings were erected on fill), the low material costs, and the ease with which it could be assembled. Rather than using the time consuming process of riveting, the basic frame, composed of simple rolled section steel columns and open web truss and joist members, was bolted or welded together. The stud walls which framed the volumes consisted of small scaled, easily handled members which could be mass-produced and cut on site with simple, inexpensive tools. Likewise, the panels of material used to cover the stud system were mass-produced, easily cut to size and could be attached by hand. The fastening systems which held these modular pieces to the frame -- generally light screws or nails -- were easily removed and raised the salvage value of the building components.

In plan, the designers resorted to a simple grid for the structural layout not unlike that which Ralph Walker and Ely Jacques Kahn exploited in their office building work. The designers adhered to a maximum span of twenty feet determined by Owings and his co-workers to be the most economical joist length.[193] Even Paul Cret's Hall of Science demonstrated the straightforward arrangement of an uninflected grid (fig. 3.137). On their interiors, the buildings

[193] Owings, "New Materials," pp. 279-89.

were treated as simple volumes, their structure playing little role in the spatial expression (fig. 3.138). Simply wrapped, the buildings carried forward the a-techtonic and volumetric light-framed systems which had been devised in the context of commercial building.

Only one building departed from this constructional logic. The Travel and Transportation Building by Holabird and Root consisted of a series of vertical steel trusses supporting a cable system which in turn held up a the broad roof over the large interior space (figs. 3.139, 140). The construction was remarkable for a variety of reasons. In separating the compressive and tensile loads in the vertical piers and supporting cables, the scheme adopted the structural principles that would be popularized later by Buckminster Fuller. The designers identified unique problems of movement in the exterior skin of the building caused by expansion and contraction due to temperature changes and by a structural system that magnified the elasticity of its tensile members. To absorb this movement they devised interlocking connections that maintained the integrity of the enclosing skin. In the context of the other exposition pavilions, the most unique feature of this pavillion was the visibility of the structural system which contrasted with the structurally void volumes of the adjacent buildings. The design of the Travel and Transport Building also emerged from different criteria for spatial enclosure -- criteria which permitted a far more heroic scale -- than did the other pavilions whose spanning dimensions were limited to twenty feet.

The first pavillion to be erected, the Travel and Transport Building was a distinct exception among the fair pavilions and by its uniqueness highlighted the techtonically mute designs by Cret, Hood, and other members of the Architectural Commission.[194] Situated across the central lagoon from the site of Cret's Hall of Science, Hood's Electrical Group was the second pavilion to be constructed. In his efforts to determine the nature of the building fabric in 1930, Hood's associate, Carl Landefeld, inquired of the exposition's Works Department how the building should be structured. The answer to his question was provided in a subsequent letter from C.W. Farrier, an associate of Owings and Skidmore's in the fair administration. Of the structural

---

[194] The Administration Building by Holabird and Root was the first building to be erected but it was not an exhibition pavilion.

231

principles operating in the selection of the pavilion's structural grid, he wrote, "the principle

involved is to get the cheapest and most suitable material possible."[195]

In an article which appeared in _Architectural Record_ in 1932, a year before the CPIE

opened, Nat Owings outlined the basic principles of the work of the Exposition planners in his "five

points."

> It is believed that many of the departures from standard building
> practices outlined in this article are fundamentals which must be observed if the
> cost of construction is to be materially reduced. Summed up these include:
> 1. Drastic revision of existing building codes.
> 2. Increase in the allowable stress of building materials.
> 3. The acceptance aesthetically of the temporary look of a building,
> skimmed down to its essential requirements.
> 4. The substitution of a 'skin" or thin surface covering for the exterior of
> buildings in place of thicker materials, which have been used primarily to give an
> impression of permanency, solidity and strength.
> 5. The willingness and ability of manufacturers to cooperate intelligently
> and efficiently in developing new materials and methods of construction.[196]

These points codify the work of American architects in the 1920s and 30s. Although his immediate

goals were merely to respond to the economic dilemma imposed by the depression on his work at

the exposition, Owings underlying agenda was no different than that of Shreve, Lamb & Harmon

in their work on the Empire State Building: to reduce the cost of building by raising productivity of

the construction. The degree to which this agenda persisted as a determining motif of architectural

design canons in the following years is suggested by the growing importance of Owings' work after

World War II when he and Louis Skidmore established their reputation in the firm of Skidmore,

Owings and Merrill in corporate architecture. The careers of both Skidmore and Owings

therefore suggest the undercurrent of continuity between the 1920s and the later emergence of the

American Modern Movement in the 1950s.

The crash of the New York stock market in October of 1929 signaled the collapse of

highly leveraged, credit-financed speculation. Buildings as well as the bond, mortgage, and stock

packages which made them possible lost value in the same way as did the physical plants and

securities of much of American industry. Unable to produce a market, office buildings shared the

---

[195] C.W. Farrier, Division of Works, CPIE, to Carl Landefeld, Associate in the office of Raymond Hood, New York City, March 14, 1930, CPIE UIC folder 5-25.

[196] Owings, "New Materials," p. 279.

fate of other industrially produced commodities that crowded the inventories of American manufacturers. But, the collapse of that economic structure could not take away the impact of the previous decade of change in the construction industry and in the way architects worked. American architects would persist in placing emphasis on the correlation of the "production" of their offices with the pace of activities on the job site. They would continue to seek out other experts in the industry with whom they exchanged ideas and helped to formulate design conventions more in tune with advances in construction technology and management. They would accept the "implements" of standardization and mass-production as vital components of the arsenal of experts responsible for building production. They would reduce the complexity of ornament, incorporate new industrially produced materials and attempt to develop efficient plan forms which maximized usable space. And, they would adopt the agenda of the investment community whose goals for building were the further expansion of its capital.

Chapter Four: Architecture and the Planning of the American City, 1918-1933

> Architecture...has the deepest significance and the most durable results in influencing the growth of the city and the education of its citizens.[1]

Thomas Adams (1931)

In the quarter century between the World's Columbian Exposition in Chicago in 1893 and the end of World War I, the agenda of urban reformers in the United States changed: first, as they shifted their view away from the model of urban design given by the White City toward that of the so-called "City Efficient"; and then later, as they began to expand their focus from the city to the urban 'region.'[2] Whereas the aspiration for a 'City Beautiful' emerged from the desire to render the city aesthetically whole through its architecture and wholesome in its park areas, the new discipline of urban 'planning' pursued a 'City Efficient' and carried out a managerial agenda intent on perfecting the urban machinery which sustained American industry and facilitated the distribution of its goods. By the 1920s, the expansion of the urban territory caused both by speculation in undeveloped land at the periphery of cities and greater mobility of their inhabitants suggested that the domain of planning could not be limited by traditional political boundaries. Planners imagined a new field for their endeavors -- regional in its scope -- in which to apply the strategies of urban management devised in the previous three decades.[3]

Seen from the perspective of the architect, this shift in emphasis meant the gradual displacement of the conventions of the highly aestheticized City Beautiful by the 'scientific' methods of city planning. By the 1920s architects could no longer presume to possess the knowledge necessary to organize urban plans. The 'service' which social reformers had called upon

---

[1] Thomas Adams, The Building of the City (New York, 1931), p. 82.

[2] Two essays and two books form the core of secondary material on this topic, Christine Boyer, Dreaming the Rational City (Cambridge, MA, 1983); Mel Scott, American City Planning Since 1890 (Berkeley, CA, 1969); Manfredo Tafuri, "The Disenchanted Mountain: The Skyscraper and the City." and Francesco Dal Co, "From Parks to the Region: Progressive Ideology and the Reform of the American City." both in Ciucci et al, The American City: From the Civil War to the New Deal (Cambridge, MA, 1979).

[3] In the early twentieth century, planning comprised a new area of investigation into the operation of the city which combined a variety of disciplines including law, the social sciences, medicine, engineering as well as architecture. Its knowledge base, as Christine Boyer has shown, was therefore diverse. But, planning nevertheless stressed the technical rather than the aesthetic aspects of urban organization. See Boyer, especially part II.

architects to make after 1893 -- that of improving the aesthetic conditions of the city -- held no value in an era in which urban reform meant primarily the organization and management of activities and infrastructure in the urban center and later within the surrounding metropolitan regions. Having displaced architects from their role as urban designers, planners spurned the legacy of the City Beautiful, asserting that the task of reconfiguring the city rested in the determination not of how streets and parks should look but rather of where they should be located and how big they should be in order to perform effectively as integrated components of the urban machinery. As Nelson Lewis explained in his text on city planning in 1916, "The fundamental problems of city planning are, and from their very nature must be, engineering problems."[4] Statistical analysis and the technical procedure of programming relationships between urban functions pre-empted the methods of instituting visual order employed by architects according to the model of the White City.

In the 1920s, architects attempted to redefine both the nature of their involvement in the reconfiguration of American cities and the relationship of their 'expertise' to that claimed by the new discipline of urban planning. Although the services that they had cultivated in response to the City Beautiful were not applicable to the technical problems that planners now presumed to address, architects were able to apply their skills of depiction to the managerial goals of the planner. Their success in forging an allegiance between planning and architecture was first apparent in the war-time housing proposals undertaken by the federal government after 1918. In these projects, architectural design portrayed a new social continuity which sought to preclude the emergence of an independent consciousness among the working class, thus to avoid disruptions of industrial output caused by the sometimes violent outbursts of antagonism between labor and management. Whereas this phase of the partnership between architects and planners was dominated by the agenda of increased productivity, the post-war era introduced a new mission for planning: to render the machinery of real estate investment and speculation within the urban and regional terrain more effective. Contributing, as they had during the war, their skills of depiction

---

[4] Nelson Lewis, The Planning of the City (New York, 1916; reprint 1923), p.1.

236

to this effort of city and regional planning, architects endeavored to create a new urban imagery

with which to sustain a 'regional consciousness.' Similar to the verbal rhetoric developed by

planners, architecture provided a visual rhetoric which solidified the image of the city and forged a

'regional patriotism' that overstepped the divisive polarities of political opinion manifested in the

friction between small and politically independent communities lying in the path of the expanding

urban infrastructure. Thus, within the period between 1918 and 1933, architects applied

themselves to the task of propagandizing planning both in its quest for industrial efficiency and

urban expansion that sustained the economic viability of real estate development.

Moving Beyond the White City

In 1917, in the midst of preparation for World War I, the Committee on Town Planning of

the American Institute of Architects published a compendium of urban plans prepared since 1893

by architects and town "planners" for over 100 American cities. City Planning Progress, whose

illustrations depicted predominantly monumental civic groups located at the focal point of

intersecting boulevards integrated with new park areas, celebrated the design principles of the City

Beautiful Movement and the role of the architect as the evocator of urban rebuilding. Prominently

featured were two of the architecture profession's most celebrated contributions to urban design:

the work of the McMillan Commission for Washington D.C., the documentation of which included

the Committee's proposal for the mall as well as outlying parklands and road systems, and the

Chicago Plan by Daniel Burnham and others (figs. 4.1, 2a, b).[5]

The motivation for depicting Washington D.C. as a coherent and 'beautiful' urban

environment was self-evident given the city's symbolic importance as the seat of national

government. The same rationale of this symbolic program also extended to state capitals

throughout the United States, places such as Albany, New York, or St. Paul, Minnesota, whose

architectural focal points consisted of buildings for local and state government (fig. 4.3a, b, 4).

Plans for large civic groups for other important cities, capitals of commercial or cultural life within

---

[5] George Ford, ed., City Planning Progress in the United States (Washington DC, 1917), p. 183-86.

237

their respective states such as Philadelphia and Saint Louis,, were equally convincing as potential sites for 'White City' proposals (figs. 4.5, 6a, b).

As had been the case with the Burnham Plan for Chicago, these urban scenarios also included dramatic boulevards combined with extensive park areas highlighted by architectural embellishments of a purely ceremonial or pictorial function as was suggested by the urban exedra and colonnade by Hewitt and Brown for Minneapolis, MN, illustrated in City Planning Progress (fig. 4.7). The proposed groupings of buildings for municipal government were augmented by libraries, courthouses and post offices, creating focal points for the city's cultural and political life and demonstrating the presence of a centralized and well ordered institutional network underpinning the lives of its inhabitants. The civic building group, frequently integrated into an urban park system, epitomized the hope of the City Beautiful that its formal rigor and arcadian imagery would somehow relieve the ills of urban dwellers caused by social disorder evident in the city.[6]

As we have previously noted, the White City revealed its heritage in American Progressivism both in the aspiration it expressed for political and cultural reform and in the conviction with which it invoked 'art' as a weapon against social ills. City Planning Progress demonstrated this dimension of the movement as well as the spirit of Progressivism evident in the mechanism by which these plans were intended to be implemented. It was important, for example, to the editors of the AIA document that the process of formulating and carrying out a city plan should not rely on support from urban government.[7] Rather private citizens working outside of the political system were to carry out the process, their success dependent on their ability to appeal directly to the population at large. Only in this way could the plan be defended against special interests and the political corruption of 'boss' rule. This critical distance fueled the popular enthusiasm for the White City, its aesthetic orderliness opposing both the formal incongruity of the existing late nineteenth century American city fabric and the disarray of its political enterprise.

---

[6] Scott, pp. 36, 43, 73.

[7] Ibid., p. 168.

However, City Planning Progress also yielded evidence of the impracticality of the City

Beautiful. Its illustrations recorded grandiose schemes whose immensity may have been

inspirational at first but which ultimately precluded their fulfillment, a fact told by the drawings for

uncompleted proposals in, for example, Milwaukee, Wisconsin; Seattle, Washington; and

Minneapolis, Minnesota (figs. 4.8-10). Interspersed with these better known urban centers were

other cities -- such as Olympia, Washington; Kenosha Wisconsin; Johnstown, Pennsylvania; New

Haven, Connecticut; Hot Springs, Arkansas -- for which plans also depicted impressive

configurations of civic buildings (figs. 4.11-13). By 1917 efforts to realize many of the plans which

this book contained were over a decade old with little to suggest that they would ever be realized.

While few Americans denied the beauty of these schemes, critics of the White City rejected the

proposals as being too expensive and unrealistic. They pointed to the seeming contradiction of

instituting aesthetic reforms of the physical fabric in cities without fundamentally changing the way

in which the city operated. Examples of urban problems not addressed by these schemes

abounded such as traffic congestion or inadequate and unsanitary housing. Critics took the

aestheticized White City model to task for merely diverting attention from these conditions of

urban malfunction rather than instituting any corrective measures.[8]

In place of the White City, evidence of a new mode of urban design existed in the

numerous efforts at the outset of the twentieth century around the country to organize urban

transportation, water supply, waste disposal, and housing. Within the experiences accumulated by

the engineers, lawyers, politicians, health experts, landscape architects as well as architects working

together on street proposals, coordinated plans for transportation, metropolitan sewer and water

commissions, the sense emerged that these were not unrelated problems but rather aspects of the

larger problem of urban functioning, each related to one another and to city development

generally.[9] Groups of experts addressed city planning as a technical rather than aesthetic solution

to the problems of urban America. Moreover, in contrast to the White City proposals which

---

[8] Scott, p. 80. Among the notable critics of the White City proposals were Nelson Lewis and Herbert Croly. .
On the emerging critique prior to World War I, see also Theodora Kimball Hubbard and Henry Hubbard in the Our
Cities Today and Tomorrow: A Survey of Planning and Zoning Progress in the United States (Cambridge, MA, 1929).
[9] Lewis, "Introduction."

seemed only to conceal the industrial enterprise responsible for the collisions of classes and the chaos of densification from which the city suffered, these 'experts' regarded the city as a necessary consequence of industrial activity, not merely the result of the exigencies of production but also constituting the arena for the consumption of its products.[10] "The Modern city owes in most cases its genesis and in all cases its growth and prosperity to its facilities for internal communication and for easy access to its sources of supply and to markets for the disposal of its manufactured products," Nelson Lewis further remarked in his 1916 book, The Planning of the City.[11] Following the dominant perceptions of industrial managers, planners began to view the city as the context in which men and women were absorbed into industry both as the source of its creative power and as the consumer of its products.[12]

In viewing the urban environment in this way planners could no longer conceive of the city as an entity tending toward a perfect state embodied in a White City. Rather they began to think of the city as a network of relationships whose physical manifestations in streets and buildings were in constant flux. The planner's task was to manage those relationships, seeking more efficient juxtapositions of activities and more economical allocations of space. While the abrupt contrast between the contemporary city and the city transformed as "beautiful" still played a part in strategies of urban government (working to pacify and inspire confidence among its constituents in its ability to control urban culture), planners absorbed themselves in the task of 'engineering' the

----

[10] The relationship between urban planning and the evolving discipline of industrial management was not merely coincidental. As Boyer points out, the increases in industrial productivity which managers had been able to achieve by reorganizing factory work in the first decade of the century reached a plateau by 1910. Having refined and perfected the relationships between labor and machinery inside their plants, managers now looked beyond the individual enterprise to consider ways in which to organize industrial activities within cities. For example, they began to focus on the relationships of their factories to cheap land, worker housing, electric power, and transportation. They applied to this matrix of functions the organizational strategies of Scientific Management, seeking greater efficiencies in the component tasks that were bound up in industrial production. It is equally important, Boyer points out, that as managers raised the levels of industrial output they created a need for larger markets for the commodities produced. Thus, a new agenda emerged from the management discourse which called for a model of industrial planning capable of coordinating all of the activities of industrial production, distribution, and consumption. The scope of this managerial program was broad, overstepping the individual company to incorporate larger physical and social territory. With this aspiration to regulate industrial functions at a large scale, urban planners were encouraged to offer the design of cities as an extension of industrial planning. Boyer, p.119

[11] Lewis, p. 54. Boyer also describes a change in the attitudes of urban planners evident between 1909 and 1916 when they gradually stopped thinking of the city as an evil conquerable by "ruralizing" it and began to perceive it instead as a necessary evil that could be improved by effective management. Boyer, pp. 59-113.

[12] Boyer, pp. 139-70.

240

city and incessantly fine tuning its operation. Whereas the "White City" was final and apocalyptic, technical planning, the 'City Efficient,' was modal and focused on gradual but constant change with no specific formal end.

If it could be said that the aspiration for a 'City Beautiful' coincided with the proliferation of a design method that promised visual order then the popularity of the image of a 'City Efficient' inspired planning methods to be developed which promised greater levels of control over urban function. Of these methods, zoning, or the special designations by municipal governments of 'zones' in which restrictions on usage, coverage and size might apply, emerged most strongly as a means of creating "order out of the chaos" of the modern city. Present in major cities throughout the United States since the nineteenth century, zoning reached new levels of acceptability by the 1910s especially in larger urban centers where the conflicts between individual liberties exercised in the development of private property fell into conflict with the health and safety of citizens at large. In 1916 with the passage of the New York City Zoning ordinance -- a planning model ironically featured in City Planning Progress -- a new phase of zoning legislation began in which a comprehensive order was established over the urban terrain, allocating uses and building volumes (figs. 4.14-16). With this device the planner's task of rearranging urban functions was greatly facilitated and planners themselves were emboldened in their conviction that they could manage relations of production and exchange which took place in the city.[13]

Although architects still endorsed the White City, this new perception of urban planning as a subcategory of industrial planning manifested itself in their discussions of urban design. In seeming contradiction to the message of its contents, the editors of the AIA text concluded their introduction by asserting that the plans, "must appeal to the business man and to the manufacturer as sane and reasonable."[14] Looking back from 1929, Henry & Theodora Hubbard suggested that rather than marking a point of departure for American city planning, City Planning Progress designated "the close of an era" indicating the demise of the paradigmatic White City.[15] By its

---

[13] Gordon Whitnall, "History of Zoning," Annals of the American Academy of Political and Social Sciences 155:II (May 1931) p. 3; Scott, p. 75; Boyer pp. 139-70.

[14] Ford, Planning Progress, p. iii.

[15] This was the view expressed in Hubbard and Hubbard, p. 8.

241

internal inconsistencies and its assertion of outmoded axioms of planning, the publication

invalidated its own premises and set the stage for a moment in which architects and other experts

who viewed the city with an eye toward improving it concerned themselves with its function as a

locus of production and consumption rather than as a focal point of political and cultural life.

World War I and the Planned Industrial Community

The association between city planning and industrial management achieved deeper

relevance during World War I. The war effort placed enormous demands on American factories.

As we have seen in the previous chapter, the Wilson administration implemented new strategies of

control over all phases of production in an effort to boost production, seeking a new scale in

managerial organization and a new degree of direct governmental involvement. The task of

organizing transportation, housing and industry which Wilson undertook as part of his strategy for

the wartime industrial expansion was close in spirit to the problems with which the young planning

profession had presumed to concern itself before the war.

Within the planning community, advocates of housing reform, in particular, celebrated the

housing acts that Wilson engineered in 1918 through the United States Shipping Board and the

Department of Labor because of the opportunities these presented for creating integrated urban

and industrial communities planned according to rational juxtapositions of transportation, industry

and housing.[16] They were also enthusiastic about the prospects of broad governmental support.

Here was a chance to demonstrate how a large scale publicly financed housing effort could be

coordinated and how beneficial community organization could be to both the industrialist and the

---

[16] The work of the planning staffs of these two agencies was similar, their responsibilities being primarily to
determine the need for housing. In response to complaints from managers in essential industries that they had an
insufficient labor pool to man their factories and meet the tremendous war-induced demand, federal inspectors spent
several days assessing the nature of the problem in each location. When residential communities were too far from
factories to be practicable as the source of labor, inspectors might propose as a first alternative the introduction of a
state-financed transportation system. If this proved to be an untenable solution, they could propose that the government
help to erect housing nearby. On the housing programs of the Emergency Fleet Corporation and the United States
Housing Corporation see, U.S. Department of Labor, Report of the United States Housing Corporation, vols. 1 & 2,
George Ford, ed. (Washington DC, 1919); U.S. Department of Labor, Report of the United States Housing Corporation,
Henry Hubbard, ed. (Washington DC, 1920); U.S. Shipping Board, Emergency Fleet Corporation, Types of Housing for
the Shipbuilder (Philadelphia, PA, 1919); U.S. Department of Labor, Standards Recommended for Permanent Housing
Developments (Washington DC, March, 1918).

worker. As a consequence of the war experience, a significant segment of the planning community supported governmental intervention into the production of worker housing and hoped to institutionalize it both within the ideology of planning and within the American political arena.

From the outset, architects were involved with the formulation of this program. In 1917, a year before Congress authorized funding for war-time housing, the AIA's Committee on Housing and Community Planning together with the AIA Journal under the direction of Charles Whitaker endorsed a governmentally subsidized housing program.[17] Working together with members of Lawrence Veiller's National Housing Association, committee member Frederick Ackerman urged Wilson to take this opportunity to establish standards for worker housing and a planning model for industrial communities.[18] By 1918, the federal government's Emergency Fleet Corporation which would finance the construction of housing for the shipbuilding industry assumed the model of the English Garden City as described by Ackerman in a series of articles presented in the AIA Journal the previous year (fig. 4.17).[19]

The housing agenda that Ackerman, Whitaker, and the members of the AIA committee described in 1917 strongly favored public over private financing of worker housing. At the core of their belief system lay a hatred of the profit motive which both stole the fruits of the laboring class' work and diverted capital from the development of efficiency enhancing technologies.[20] Housing was very much a part of this scenario, seen as both a "fruit" of industry -- which for reasons of humanitarianism and social justice the working class deserved -- and as part of its efficiency enhancing technologies. This strange juxtaposition of aspirations for, on the one hand, humane and progressive social reform and, on the other, an enhancement of industrial efficiency

---

[17] Reprinted in a single volume in the following year as Charles Whitaker, ed., The Housing Problem in War and Peace (Washington DC, 1918).

[18] The National Housing Association was formed in 1910 by Lawrence Veiller, the author of the New York City Tenement Law. The group brought together sociologists, planners and architects and was an effort to establish a national forum for the discussion of housing standards. Richard Candee, Atlantic Heights: A World War I Shipbuilder's Community (Portsmouth, NH, 1985), p. 55.

[19] Frederick Ackerman, "The Significance of England's Program of Building Workmen's Houses," AIAJ 5 (November 1917) reprinted in Whitaker, Housing Problem; Candee, p. 56; Dal Co, pp. 222-231.

[20] These housing advocates found their ideological direction within Wilsonian progressivism: they espoused a social idealism that was fired by a belief in the capacity of the federal government to regulate the industrial economy and to apply its productive force toward social improvement. On their progressivism, see Dal Co, pp. 222-231.

demonstrated a thread of ironic discontinuity that wove its way through the thinking of many

reformers throughout the twenties. For all their interest in "wholesome housing" as a means of

uplifting the lot of the American working class, housing advocates justified their efforts to raise the

standards of industrial housing on the basis that it improved the productivity of labor by giving

workers a better and more healthful environment in which to live.[21]

This duplicitous agenda manifested itself in the federal housing programs both practically,

in terms of the mechanism by which housing was carried out, and ideologically, in the design

conventions which architects and planners adopted. In practical terms, the governmental agencies

overseeing the production of housing established efficiency of their operations and low cost in

materials and construction as means toward achieving improvements in industrial housing.[22] We

have already noted their efforts to standardize materials and methods employed in the production

of government subsidized housing. At the same time, they adopted a precise iconography in the

plans for towns and buildings they designed which sustained rather than violated existing

conventions of taste. In contrast to their efforts to simplify design, standardize components, and

exploit large-scale industrial processes as a means of speeding up the construction process and

reducing costs, the design teams of these housing groups produced communities whose site plans

contrasted curvilinear street forms in residential areas against axial 'boulevards' which focused

attention on centralized community functions (figs 4.18, 19). Reinforcing the communal character

were buildings with a purposefully traditional -- if not quaint -- character (fig. 4.20).

The contrast between the unprecedented coordination evident in the design process which

produced these buildings and their traditional appearance is evident even in the instructional

manuals produced by the housing boards. In the same document prepared by the Labor

Department's U.S. Housing Corporation advocating "urgency in speed in construction and the

necessity for using materials available in quantity or capable of quantity production" which might

indeed force "the adoption of materials and methods of construction not customary in the best

[21] Ackerman, "How Shall We Provide Good Houses for All?" in Southern Pine Association, Houses for Workmen (New Orleans, LA, 1919), p. 23.

[22] See Chapter Four.

practice" it was also suggested that houses be made of indigenous materials, sloping roofs, incorporate natural beauties and be neither overly similar nor overly dissimilar. In contrast to their managerial strategy which emphasized the division of design 'labor' between architects, planners and engineers, the approach to the design of the communities and houses stressed a continuity with conventional aesthetic values. "People in this country," the report concluded, "want to live in independent self sufficient homes of their own in a real and complete American town which they understand and run their own way and they do not want their homes to be or to look the parts of an artistic or sociological experiment."[23]

The advocacy of traditional imagery is evident even in the initial endorsements by Ackerman and Whitaker of the English Garden City. Following that precedent Whitaker called for the use of traditional styles for housing and motifs within the urban plan such as curving roadways and the incorporation of existing landforms into the community layout. These features, he thought, should impart to the new communities a sense of continuity with the culture of American small towns. Moreover, in its evocation of a rural and landed citizenry, Whitaker noted how traditional imagery inspired a commitment to a national purpose. "What is a house?" he asked rhetorically. He continued,

> It is the prime element of national growth. It is the soil whence springs that
> eagerness in the heart of every man for a house of his own. It is, after all, the
> physical attribute of life upon the possession or retention of which most of our
> energy is diverted. Because of these things it is the backbone of the nation.[24]

Although Whitaker's advocacy of these English models may have been the result of a genuine appreciation of their architectural character, his words reveal that similar housing in the United States also had a didactic role to play, functioning in the 'Americanization' of the working class.[25] These communities played an ideological role, fulfilling the promises of 'industrial democracy' on the one hand, and encouraging working class Americans to think of themselves as typical citizens, on the other. Their residential environments standing in as a sign of a shared traditional and cultural heritage, this architecture encouraged workers -- perhaps as strongly as did

---

[23] U.S. Department of Labor, Report (1919:2), p. 67, 74.

[24] C.H. Whitaker, "What is a Home." in Whitaker, Housing Problem, p. 6.

[25] William Comstock, The Housing Book (New York, 1919), p. 14.

any other mass media employed by federal propagandists -- to sublimate their antagonism toward their employers beneath their sense of duty to perform in the country's interest.[26]

The designs of whole communities offer more insight into these iconographic goals. In the plans for Yorkship Village near Camden, New Jersey (designed by Electus Litchfield and Pliny Rogers) curvilinear street patterns served both to match the street to the existing topography and also to reduce the length of view down streets, shortening the distance perceived and rendering the spatial quality more intimate. A large project such as Hilton, built by the Newport News Shipbuilding and Drydock Company, Newport News, Virginia (designed by Henry Hubbard, planner; Francis Yoannes, architect; Francis Bulot, Sanitary Engineer) demonstrates the characteristic axiality in the street layout focused on a small group of community buildings including some of the larger dwelling units, churches, railroad station, and a community building (fig. 4.21). The design team amended this formula to enhance the intimacy of the scheme by expanding the space between houses in the middle of blocks and pinching them at the end, a method described in the U.S. Housing Corporation's reports as "street setback" and depicted with an example taken from the plans for Truxton, Virginia, a town in the vicinity of Norfolk designed by R.E. Mitchell (fig. 4.22). "A section of street may be made to look distinctive," the Labor Department manual suggested, "by setting the houses close to the street at each end of the section and farther back in the middle so forming or suggesting an enclosed space into which the houses look."[27]

These combined strategies are demonstrated vividly by a comparison of two schemes for housing at the shipyards at Atlantic Heights outside of Portsmouth, New Hampshire, the first commissioned privately by a local shipbuilding company engaged by the federal government to manufacture cargo ships, and the second designed by architects working for the Emergency Fleet Corporation, a division of the U.S. Shipping Board.[28] Recognizing the necessity of worker housing to attract a labor pool sufficient to man their yards and complete their government contracts, the

[26] On the rhetoric of industrial democracy see David Brody, Workers in Industrial America: Essays on the Twentieth Century Struggle (New York, 1980), p. 56.

[27] U.S. Dept. of Labor, Report (1919:2), p. 72.

[28] Candee, pp. 59-61.

directors of the Atlantic Shipbuilding Corporation hired the Boston engineering firm of Lockwood

Greene and Company to prepare a plan (fig. 4.23). When the Emergency Fleet Corporation made

funding available for the housing, the Boston architects, Kilham and Hopkins, developed a new

scheme on the government's behalf (figs. 4.24-26).[29] Here one sees evidence of the design

guidelines advocated by the government planners. The Emergency Fleet team eliminated the

straight streets and proposed to follow the natural contours of the site. They controlled the house

fronts so that the ends of streets slightly compressed the streetscape and created a sense of closure.

Moreover, they grouped the larger buildings at the head of the project around an open space

concluding an axial street and connecting this space and a park overlook at its far end.

These projects suggest a lineage stretching back to such American projects as Frederick

Law Olmsted's work at Riverside, Illinois in the late nineteenth century and the models of

community planning admired by Frederick Ackerman in England, of which the best early example

in the United States was Forest Hills Gardens by the Olmsted firm and the housing architect,

Grosvenor Atterbury. However, unlike Riverside, a commuter suburb, or Forest Hills Gardens,

intended as a working and middle class suburb, much of the government built war-time housing

was located away from urban centers, and offered no diversity in employment opportunities to

their inhabitants. In marked contrast to Forest Hills Garden which lay on the periphery of New

York City and which was served by mass transportation, Atlantic Heights, for example, housed

primarily workers from the adjacent shipbuilding facility who had few other opportunities for

employment in their immediate vicinity. Members of the AIA Committee on Community Planning

expressed some fear that these would become "one industry towns." In an article by Richard

Childs which appeared in the AIA Journal in 1917, he noted, "Except in towns where there is great

diversity of employment the effect is to tie the worker to the mill owner like a feudal peasant to his

---

[29] Arthur Kilham was a well known housing advocate responsible for several projects done before the war in conjunction with the Boston Homestead Commission. He had also written on the subject of workers housing including, "Housing the Single Worker," AF 28 (April 1918): pp. 161-7; "Housing by the Commonwealth of Massachusetts," in Whitaker, Housing Problem, pp. 94-97. Kilham was a member of Veiller's National Housing Association making his appointment as architect for Atlantic Heights more understandable. See also Candee, pp. 67-70; and Whitaker, Housing Problem, pp. 94-7.

lord."[30] The fact that the federal government sponsored their construction and regulated rents removed the onus of paternalism but did not resolve the practical problem of the excessive isolation of the Garden City model.

Other equally problematic internal inconsistencies arose in the context of this housing movement. On the positive side, the application of large scale managerial techniques such as standardization resulted in extraordinary savings in time as we have seen in the case of Nitro, West Virginia. Atlantic Heights was itself completed in 1 year. Moreover, Kilham and Hopkins managed to achieve a humane and diverse environment despite these 'industrial' successes. Equally important were the successes of planners applying rational strategies of organizing the social fabric contained within these towns with the intention of enhancing the 'organic' relationship of family types. In the work of the U.S. Housing Corporation, houses ranged from two family semi-detached to multiple dwelling and dormitory units, ensuring that the communities could cater to and would contain a range of social characters.[31] But this principle of social order was applied with more mechanical results especially in the south where the relationships between classes were complicated by racial antagonism. Nitro, West Virginia, followed a zoning pattern which defined living areas both on the basis of economic classes and on the basis of race. At the lowest rung, blacks and unskilled foreign-born were housed together in the densest configurations. Unskilled white laborers were housed together in slightly more commodious buildings and skilled mechanics and foremen were housed separately in the most spacious accommodations (fig. 4.27).[32] Thus a hierarchy of relationships determined by industrial tasks, economic classes and race was superimposed on and incorporated into the fabric of the community itself.

Governmental sponsorship and the aspiration to improve the standards of worker housing tended to obscure the problematic nature of the Garden City model and of planning methods such as zoning. In fact, the message which the war-time housing program carried to housing advocates

---

[30] Richard Childs, "What is a House" in Whitaker, Housing Problem, p. 53.

[31] The "planned" coordination of dwelling types was consistent with Garden City principles which called for communities in which a wide spectrum of social classes and family types lived. It should also be noted that as head of the Labor Department Housing program, Frederick Law Olmsted encouraged use-zoning as a means of programming the relationships of functions and of dwelling types. Scott, p. 173.

[32] Southern Pine Association, Houses, pp. 78-87.

248

and planners was one of hope because it both demonstrated the relevance of adequate housing to the success of private industry and provided a precedent for governmental sponsorship.[33] In particular, the group which had gathered around Charles Whitaker at the AIA, including Frederick Ackerman, architects such as Henry Wright and Clarence Stein and the young writer, Lewis Mumford, perceived the war-time housing movement as a model for future community planning efforts and indeed as an indication of the possible direction of city planning generally. Advocating large scale planning which addressed, as had the war-time housing, the functional relationships between industry and housing and the social order of new communities, the group endeavored to formulate the 'fundamental principles' of planning. They continued their endorsement of the 'Garden City' model and emphasized both its rural and traditional imagery.

But the group was not oblivious to the dilemmas intrinsic to this model. Clarence Stein noted how zoning, a methodology of urban organization advocated by diverse special interest groups, could be applied in the service of a dubious social agenda when he criticized the city plan for Atlanta, Georgia which proposed to institutionalize segregation in its zoning ordinance.[34] Richard Childs expressed concern about the corruption of the 'Garden City' model if workers were left with few work options because of their isolation from large urban centers.[35] Frederick Ackerman derided architects and planners who embraced the logic of industrial efficiency as both the means and end of housing reform: this resulted in a planning agenda at odds with itself, he claimed, one that was simultaneously committed to social reform and to "principles which are drawn upon to support and sustain those institutions, the working of which have brought on the present state of inadequacy and maladjustment in our urban centers."[36]

Ackerman based his critique of city planning both as it had evolved before and during the war on his disbelief in the feasibility of aligning the interests of industrial leadership obsessed with

---

[33] The war-time housing effort had also provided an opportunity for housing advocates to suggest guidelines by which housing generally might be improved in contrast to the "restrictive" housing ordinances such as the New York Tenement Law which merely, in the words of Edith Elmer Wood, prevented the bad but did not procure the good. Edith Elmer Wood, "What is a House?" in Whitaker, Housing Problem, p. 76.

[34] Clarence Stein, "Zoning in Atlanta," AIAJ 10 (June 1922): p. 205.

[35] Richard Childs, "What is a House?" in Whitaker, Housing Problem, p. 53.

[36] F.L. Ackerman, "What is a House?" in Whitaker, Housing Problem, p. 17.

profits with the goals of a humane housing and community development program. In this he revealed Thorstein Veblen as an intellectual mentor and postulated that only by eliminating the profit interest could one achieve a suitable environment for lucid and rational planning. So, Ackerman criticized the tendency of planners to advertise their discipline as a method by which urban operations could be made more efficient because it too easily deteriorated into indiscriminate appeals to powerful interests seeking higher levels of profit rather than intrinsically better communities. Instead, he and other members of the AIA group strongly supported the idea that the profit motive which sustained the "normal tendencies" of urban growth had to be excluded from the area of housing and community development to be replaced by a permanent system of governmental subsidy of housing.[37]

Yet, Ackerman and like-minded housing advocates were frustrated in their hope for a national or state planning agency coordinating housing developments according to the needs of the industrial labor force but responsive to conditions of topography, climate, and natural resources and built with public funds. As we have seen, the United States Congress -- with the support of an AIA leadership concerned with the deterioration of the professional's status as a private practitioner -- expressed its unwillingness to place the government into direct competition with the private sector and ordered that the machinery by which American war-time housing was produced be dismantled. Emergency Fleet loans to industrial realty corporations were reduced and repaid on an accelerated schedule. The U.S. Housing Corporation sold its buildings and property to private owners and speculators and much of the Ordinance Department's housing which had been prefabricated was disassembled and removed from its locations.[38]

The hostility of the post-war political climate to publicly sponsored initiatives undermined Ackerman's aspiration that planners become less concerned with political expedience and more aggressive in their search for true change in the social and economic order. Although planning might have been a discipline whose technical capabilities could and would be used to organize living and working environments for the purpose of increasing their efficient operation, planners

---

[37] Edith Elmer Wood, "What is a House?" in Whitaker, Housing Problem, p. 76.

[38] Edith Elmer Wood, Recent Trends in American Housing (New York, 1931), pp. 71-9.

demonstrated their unwillingness to challenge the legitimacy of the existing political, economic, or social order.[39] Because of this, the traditional imagery of the architecture and physical layout of these housing communities served only as an inducement for industrial efficiency. In its depiction of a false continuity with traditional and pre-modern American communities, this architecture revealed its ideological role as a device of 'Americanization' which attempted to camouflage economic and racial divisions contained within the industrial economy. The demise of the war-time housing movement revealed not only the resistance of American political and industrial leaders to the humanitarian aims of housing advocates like Ackerman but also the degree to which architects in conjunction with other experts allied in the planning field embraced the goals of industrial enhancement and ignored any agenda of social reform.

The subsequent history of both the governmental and AIA-endorsed housing activities after the war supports this interpretation. In sharp contrast to the recommendations of the AIA's Committee on Housing and Community Planning and, indeed, to the principles of governmental sponsorship embodied within its own support for the U.S. Housing Corporation, the Labor Department shifted its efforts to its "Own Your Own Home" program. Primarily a propaganda effort to inspire confidence among potential homebuyers, "Own Your Own Home" drew its political cachet from its affiliation with the movement for privatization of the construction industry. Moreover, the policies of "Own Your Own Home" were couched in a patriotic rhetoric which demonstrated its anti-union content. Wilson's Secretary of Labor, William Wilson, described the post-war drives of his department for homeownership among the working class as having been motivated in part as a weapon against political discord.

> I have found that the man who owns his home is least susceptible to the so-called
> Bolshevist doctrines and is about the last man to join in the industrial
> disturbances fomented by the radical agitators. Owning a house gives a man an
> added sense of responsibility to the national and local government that makes for
> the best type of citizenship.[40]

In spite of strong criticism from its Committee on Housing and Community Planning against the "Own Your Own Home" programs, the AIA did not comment publicly on the Labor

---

[39] Not, that is, until the New Deal.

[40] Quoted in Comstock, Housing Book, p. 14.

Department's efforts.[41] Moreover, the AIA's support of Edwin Brown's Architects' Small House

Service Bureau (ASHSB), an organization which focused solely on the designs for single family

detached homes, suggested that the professional organization stood more firmly behind the idea of

a housing industry based on independent entrepreneurship than centralized, government

sponsored housing. Its efforts aimed at a constituency of middle-income Americans, the ASHSB

also demonstrated the profession's lack of concern for worker housing. Eager to gain access for

the professional to the market for private housing, the ASHSB offered stock plans developed by its

architect/members to the public. Pandering to popular tastes, the Bureau emphasized the use of

traditional styles which, it argued, professional architects could handle more adroitly than could

private developers, 'gerry-builders,' or 'plan factories' sponsored by the manufacturers of building

components (fig. 4.28a, b).[42]

The support offered to Brown's organization by Herbert Hoover further demonstrated the

orientation of the ASHSB and its place in the post-war discourse on housing reform. In 1922,

Hoover entered the debate over housing by sponsoring a private organization called "Better

Homes in America" which advocated private development and home ownership. Intent on

improving the designs of single family houses, Better Homes in America nevertheless ignored the

larger issues of community planning which the AIA Committee on Housing and Community

Planning had raised. Expressing stylistic preferences akin to those of the ASHSB, Hoover's

organization kicked off its national appeal with the construction on the Washington Mall of a

replica of the home of John Howard Paine, author of "Home Sweet Home," designed by the

Washington architect and celebrated AIA member, Donn Barber (figs. 4.29a, b). Sensing a mutual

preoccupation with private development as opposed to governmentally subsidized housing and a

---

41 Executive Committee Minutes, (September 1925): p.5 AIA RG 510-3; and "Vicious "Own Your Own Home" Propaganda,"AIAJ 14 (January 1926): pp. 35-36. The AIA Committee on Community Planning initiated an educational campaign in 1920 which it delivered to both architects and the public at large that declared the necessity of purging 'profit-motives' from the production of housing. Thus, the group opposed the "Own Your Own Home" program on the basis that it shifted the focus of housing reform away from economic and social issues toward the less significant concerns of architectural appearance of individual houses. See, for example, John Irwin Bright, "Housing and Community Planning," AIAJ 8 (June 1920): pp. 228-229.

42 On the ASHSB see Edwin Brown, "The Architects' Small House Service Bureau, Inc., of Minnesota," AIAJ 8 (May 1920): pp. 196-7; AIAJ 9 (April 1921): pp. 135-40; Robert Jones, "The Architects' Small House Service Bureau," AF 44 (March 1926):p. 203.

belief -- however self-serving -- that professionals had a role to play in the enhancement of the

quality and efficiency of housing production, the ASHSB solicited Hoover's support and finally

received his endorsement.[43]

Its focus riveted on the single family house and on the architect's role as its designer, the

ASHSB leadership also ignored the issues of community planning that had been central to the

earlier efforts of the members of the AIA Committee on Housing and Community Planning.

Attracting the attention of practitioners to its activities throughout the twenties, the ASHSB

catalyzed the professional position toward housing. Although housing advocates within the AIA

such as Whitaker and Ackerman would continue to argue on behalf of a federally subsidized

housing program as well as a planning model which addressed issues of community and

environment, most of the AIA membership abandoned the debate to focus instead on ways to

expand the investment of private capital in a building industry serviced by architects.

Planning and Political Expediency: Sustaining the "Normal Tendencies" of Urban Growth

Though the elimination of governmental sponsorship of industrial housing and community

development may have deterred Frederick Ackerman in his quest for a new agenda for planners,

the experiences gained in the war-time housing programs did reinforce the prevailing perception

within the discipline that an integrated approach to the organization of industry and housing could

improve industrial productivity. Ackerman himself noted the power and clarity of the message.

> Modern warfare has shown as Peace could not do the vital part played by health
> and living conditions in industry for it quickly became evident what part industry
> today plays in the winning of battles at the front. This compelled a complete
> acknowledgement that the first factor contributing to maximum production and
> national supremacy is the living conditions of the worker.[44]

This outcome reinforced the planners' claim that a new order of spatial organization relating

housing and industry conceived at the level of the city was feasible and necessary.

---

[43] On Hoover's endorsement of the ASHSB see Executive Committee Minutes (November 11-12, 1921) AIA RG 510-2. On his work in housing see Herbert Hoover, The Cabinet and the Presidency: The Memoirs of Herbert Hoover, vol. 4 (New York, 1952), pp. 92-3.

[44] Ackerman in Whitaker, Housing Problem, p. 17.

Despite Ackerman's exhortations to planners that they resist the "normal tendencies" fueling urban growth, many housing advocates -- even those who condemned the excessive profits which speculators withdrew from their housing ventures -- felt compelled to argue for a housing policy that maintained incentives for private investment in residential development. Although the same language of social reform still accompanied the arguments of housing advocates, they focused their attention on ways to attract more private investment to residential construction by enhancing the profitability of housing.[45]

For this reason, housing advocates took up a campaign to promote zoning. By fixing the use and volume of buildings within the city and by guaranteeing that, for example, residential neighborhoods would not be encroached upon by industrial or commercial uses, zoning promised that property owners would be protected against fluctuations in the value of their parcels (fig. 4.30). Thus, zoning stabilized the market, as Nelson Lewis pointed out, and gave investors greater confidence in the value of property.[46] Properly advertised, zoning might be used as a means of encouraging home ownership among American families and more liberal lending policies on the part of financial institutions applying capital to the mortgage market.[47] Convinced of this logic and intent on creating new areas for capital investment after the war, Herbert Hoover authorized the Commerce Department to issue its own guidelines in 1921 which were published in the following year, distributed to hundreds of communities becoming, in many instances, the basis for their own restrictions on use and bulk. In that year, the Department of Commerce reported that 81% of the inhabitants of New York State were living in zoned communities, followed by California with 71%, Minnesota with 58%, New Jersey with 57% and Utah with 55 %. By 1930, nearly 1000 cities and towns throughout the United States had their own zoning ordinances.[48]

The relationship between zoning and housing underscored both the disenchantment with the model of publicly financed housing and the euphoria that emerged in the 1920s for disciplinary

---

[45] Aronovici, Housing, p. 83.

[46] Nelson Lewis writes that Americans "very quickly came to understand that reasonable restrictions upon the use to which a neighbor could put their property would tend to stabilize and preserve all property values." Lewis, p. 265.

[47] Aronovici, Housing, p. 83.

[48] U.S. Dept. of Commerce, A Standard State Zoning Enabling Act (Washington DC, 1922); "The Zoning Report of the Department of Commerce," Western Architect (April 1923): p.37. See also Boyer, pp. 139-40, 164.

controls such as zoning. Whereas the abrupt retreat of the federal government from housing

signified a strong resistance within the Congress to any socialization of private sector activities, the

enthusiasm for zoning coincided with a belief, broadly manifested in American society, that

rational management applied to the industrial economy could dampen the violent imbalances of

supply and demand. Francesco Dal Co has noted the similarity between zoning and other

"restrictive" forms of control on urban development patterns such as the New York Tenement

laws.[49] But zoning also attracted great attention in the post-war period during which so much

hope was placed in the promise of a controlled economy. Wilsonian Voluntarism, Hoover's

Associative State, Fordism, and even the later Technocracy all emerged from a conviction in the

possibility of adjusting and fine-tuning the relationships between production and consumption and

held that social improvement would arise out of this "rationalization" of the industrial economy.[50]

It is not surprising then that in both Hoover's advocacy of zoning and the advocacy of private sector

development of housing by the planner, Carol Aronovici, we find the same belief expressed that

the industrial economy properly regulated would lead to social improvement.[51]

As with the political philosophies that placed so much emphasis on industrial efficiency,

zoning appealed to a large and diverse audience. On the one hand, zoning attracted, as Gordon

Whitnall suggested, average Americans who craved a means to control the urban environment in

which they were trapped.[52] Densification, congestion and an unhealthy and unsafe building fabric

were characteristics of large American cities from which their inhabitants could not escape but

which, with the aid of zoning, they believed they might subdue. On the other hand, property

owners saw in zoning the ability to stabilize the character and quality of the environments in which

their real estate was located. Not only did zoning promise control over the use and volumes of

buildings permissible on urban property, it also suggested that population densities and the

location of activities which resulted in traffic congestion could be regulated. Hoping to merge the

---

[49] Dal Co, p. 207.

[50] Boyer suggests that zoning took its inspiration from Frederick Taylor's methods of "Scientific Management." Boyer, p. 163.

[51] Aronovici, p. 6.

[52] Whitnall, "History of Zoning," p. 5.

two views, the numerous proselytizers of industrial utopia proclaimed that this modest restriction would benefit all social classes causing the urban terrain to be functionally ordered and the market stabilized in which the value of its properties was set.[53]

Zoning was not without its critics. Ackerman excoriated zoning as a planning method because, he claimed, its success was due primarily to its appeal to the interests of landowners. He noted, for example, that the New York City Zoning Ordinance passed in 1916 had been accepted by the Board of Estimate, "only after it had been discovered that control over buildings was needed to insure property owners in certain shopping districts against further losses which losses had been occasioned by the free movement of industry." Therefore, he observed, one tended to find that, "Zoning is defended because it stabilizes property values."[54]

But, it was because of the clarity and forcefulness of this message that zoning drew such widespread support. As a strategy of defining 'boundaries' which enhanced the marketability of urban land parcels, zoning was easily comprehended.[55] Moreover, the popular perception of the zoning ordinance was aided by its three-dimensional manifestation in the form of the set-back skyscraper. Like zoning itself, the set-back form suggested that an important point in the maturation process of a city had been reached and functioned as a sign both of the economic pressures to build tall and of the presence of regulatory controls such as zoning. In his history of American architecture, George Edgell remarked on this iconography by noting the popular success of the setback form evident in its duplication in cities with and without zoning ordinances.

> The Zoning Law taught practicality and suggested design as well. In no other way
> can the desired effect be got so completely, and the best proof of it is the number

---

[53] This perception had been recorded in the discussions about zoning which had taken place in New York prior to the war. "...a large portion of the land of Manhattan is very inadequately utilized....A considerable percentage of the land even in what are considered built-up districts, is either vacant or very inadequately utilized....the natural result of a poor utilization of its land area by a city is high rents for occupiers and low profits for investors. It may seem paradoxical to hold that a policy of building restrictions tends to a fuller utilization of land than a policy of no restrictions; but such is undoubtedly the case. The reason lies in the greater safety and security to investment secured by definite restriction. The restrictions tend to fix the character of the neighborhood. The owner therefore feels that if he is to secure maximum returns from his land, he must promptly improve it in conformity with the established restrictions." Excerpted from a Special Report submitted to the Committee of the New York City Committee of the Board of Estimate and Apportionment, December 1913 quoted in Lewis, p. 287-88.

[54] Frederick Ackerman, "Where Goes the City Planning Movement," AIAJ 8 (August 1920): p. 285.

[55] Boyer, p. 164.

of skyscrapers that have been designed in accordance with the scheme of the zoning law in cities in which no such law exists.[56]

William Starrett voiced a similar opinion when he wrote in the Saturday Evening Post that "the Skyscraper is the accepted badge of cityhood."[57] Thus, as Edgell noted, setback towers rose in cities with and without setback restrictions incorporated into their zoning regulations (fig. 4.31).

Behind the public image of the set-back skyscraper lay, of course, the popular fascination for the highrise buildings themselves -- with or without set backs. Fueled by the public debate over the liveability of American cities, urban newspapers and magazines carried features on skyscraper construction which spoke of both their advantages and disadvantages. Detractors complained of the effect of highrise construction on the qualities of light and air in the city, the escalation in real estate values it caused and the traffic congestion it produced (fig. 32a, b).[58] Proponents argued that skyscrapers facilitated the productive concentration of people and, by their ability to increase population density, ensured the future viability of cities. By the 1920s Harvey Wiley Corbett, a popularizer of the set-back configuration, had become one of the most frequently called upon advocates of highrise building and his writings may be found in the pages of the professional journals as well as in the popular press.[59] As we have noted in the previous chapter, his arguments in favor of highrise construction hinged on his basic assumption that tall office buildings were the embodiment of rational industrial organization. Borrowing R.M. Haig's suggestion that business relied on close personal contact, Corbett claimed that urban density as well as the tall office building resulted from the tendency of well-integrated industrial management to seek closer physical proximities and more intimate working relations between its decision makers.[60] In 1927, Corbett presented this message to a gathering of the U.S. Chamber of Commerce in Washington

---

[56] Thomas Edgell, American Architecture of Today (New York, 1928), p. 356.

[57] William Starrett, "The Mountains of Manhattan," Saturday Evening Post, 12 May 1928, pp. 24ff.

[58] See for example Harlean James, "Is the Skyscraper a Public Nuisance," Worlds Work 54 (May 1927).

[59] See for example Harvey Wiley Corbett, "America's Great Gift to Architecture," NYT, 18 March 1928, pp. 4-5. Corbett collaborated with the delineator, Hugh Ferriss, whose book, The Metropolis of Tomorrow (New York, 1929), was among most characteristic visual homages to the set-back tower.

[60] W.C. Clark & J.L. Kingston, Skyscraper: A Study in the Economic Height of Modern Office Buildings (New York, 1930), p. 78.

D.C. to defend the skyscraper as a building type against its detractors. Corbett's defense, one which is frequently quoted, was characteristic.

> Along with the scale of production has gone the development of business buildings whose function is simply to facilitate business. They are just practical machines for carrying on this very important work.[61]

Corbett regarded the highrise office building as a mechanism of business administration and as both the cause and effect of American economic and industrial "dominance" internationally after World War I and throughout the 1920s.

Others also read economic success in the form of the skyscraper, deepening the associated meanings which the icon conveyed. Some also saw the highrise as a form manifesting the concentration of wealth which existed in the city and which gave it the ability to be a center of finance. W.C. Clark and J.L. Kingston described the tall office building in these terms and also as a sign of the wealth which alone could sustain the "cultural" institutions that gave the city its life.[62] This attitude was reiterated by George Henry Paine, for example, the N.Y. Commissioner of Taxes, who defended the highrise as a building type because it led, he maintained, to a rise in the taxable value of urban real estate and which, in turn, resulted in both higher revenues and an increase in the municipality's borrowing capabilities.[63]

But, it was in the particular relationship between the highrise and the zoning ordinance that the symbolism of these towers was most pregnant. The presence of highrise construction indicated, as these writers infer, the technical and economic wherewithal to produce such buildings. This image was magnified, however, when the skyscraper could be seen singly, rising alone against the background of adjacent buildings and objectifying the industrial and managerial networks that sustained the urban economy. This image was lost, however, when urban towers were concealed in a fabric of buildings of equal height, a dilemma of figure-ground intrinsic to parceled real estate

---

[61] "Economic Height of Buildings: The Skyscraper Attacked and Defended," in U.S. Chamber of Commerce, Report of the Annual Meeting (Washington DC, 1927). Portions of this text appeared in the NYT, 6 October 1929; Thomas Adams and Edward Bennett, Regional Survey of New York, v.VI: Buildings, Their Uses and the Spaces About Them (New York, 1931), p. 106; Clark and Kingston, Skyscrapers, pp. 79-80.

[62] Clark and Kingston, Skyscrapers. p.74-75.

[63] Quoted in "An Interesting Zoning Problem," Typescript, 9 February 1929, Special Collections, Harvard University, Loeb Library, VF NAC 3480.

and lot line construction. But, the symbolism of the independent tower could be reinforced by the powerful formal quality of the 'envelope' first defined by the New York zoning ordinance and observed by Corbett and Ferriss in their 1923 study which called for the gradual stepping back of towers from their lot perimeters.[64] As Ferriss' drawings for that study indicate, the epitome of the set back skyscraper produced by the zoning ordinance was a faceted tower rising independently from a larger pyramidal shaped base.

Evidence of the consensus which gathered behind this imagery is demonstrated in the buildings which rose to prominence and affixed themselves in the popular and professional imagination in the 1920s. In a contemporary photo by Edward Duer showing one of the most celebrated early set back skyscrapers, the Shelton Hotel (New York City: 1923-4) designed by Arthur Loomis Harmon, the set back profile and tower-form are clearly distinguishable from the dense party wall buildings along Park Avenue (fig. 4.33). In the same article Duer used the Radiator Building (New York, 1924) by Raymond Hood to depict a tower similarly isolated (fig. 4.34).[65] One of the most widely praised tall buildings of the early 1920s was the New York Telephone Building (1923-6) at Barclay and Vesey Streets in downtown Manhattan designed by Ralph Walker of Voorhees, Gmelin and Smith (figs. 4.35, 36).[66] The building consisted of a cluster of lower blocks reminiscent of Corbett's setback formula out of which rose a taller central tower element. Due to the trapezoidal configuration of the site, two faces of the central square shaft seemed to rise above and were rotated against the geometry of the base. This dislocation of top and base gave the central shaft a dynamic presence in its immediate context and the appearance of being liberated as an isolated form against the city skyline beyond.

Functioning as icons of an urban economic machinery preserved and enhanced by the abstract controls of zoning, these set back skyscraper communicated the successes of a regulated economy and the viability it imparted to normal tendencies of urban growth. The set-back

[64] Harvey Wiley Corbett, "Zoning and the Envelope of the Building," PP 4 (April 1923): pp. 15-8.

[65] Carol Willis discusses Hood's affinity for tower-like forms in her article, "The Modern Skyscraper," Courier XIX:1 (Spring 1984): pp. 29-42.

[66] This building appears in numerous historical texts including George Edgell, The American Architecture of Today (New York, 1928); Sheldon Cheney, The New World Architecture, (New York, 1930); and as the frontispiece to LeCorbusier, Towards a New Architecture, Frederick Etchells, trans., (London, 1924).

configuration demonstrated both the presence of a regulatory order and the ability to impose controls on laissez faire development. Dramatically dislocated from the adjacent fabric, these towers also came to be regarded as proof of the idea deeply embedded within the milieu that restrictions on industrial activities might have beneficial social and cultural as well as economic results.[67] Thus, the set-back tower was both fact and symbol, both the product and the epitome of a healthy and well-regulated urban economy.[68]

Planning the Region

By the 1920s, Americans commonly embraced zoning as a means of setting order to urban activities. But the constitutional success of zoning and its endorsement by the Commerce Department in 1922, as Gordon Whitnall has noted, unleashed a wave of implementation which had no "policy" behind it. Planners like Whitnall, expressed the fear that even though zoning offered a viable mechanism of control over the disposition of use and density in the city, it could not resolve problems such as traffic congestion or disruptive juxtapositions of urban activities by itself. Only comprehensive planning through which adequate thought might be given to the unique conditions existing within cities, Edward Bassett argued in 1920, could prescribe the most advantageous relationships of industry, housing and commercial districts.[69]

Implicit within the aspiration for such a coordinated approach to city planning was the desire to determine the most effective locations of urban activities and then to formalize those relationships in zoning legislation. However, the expansion of the urban infrastructure and the persistent dispersal of population made it necessary to plan beyond the political limits of cities. By the mid-1920s, the planning profession was forced to consider a new scale of planning which included both the city and its outlying regions at least to the limits, as George Ford remarked, of

---

[67] Thomas Adams notes that skyscrapers must have space around them to be perceived and to be regarded as beautiful. Thomas Adams, The Building of the City (New York, 1931), p. 112.

[68] This iconography was well represented in Claude Bragdon, The Frozen Fountain, (New York, 1932).

[69] Whitnall, "History of Zoning," pp. 1-14; Edward Bassett, "The Principles of Zoning," in Lawson Purdy et al, Zoning as an Element in City Planning and for the Protection of Property Values, Public Safety and Public Health (Washington DC, 1920), pp. 8-11; Frederic Delano, "Zoning Laws and Their Relation to Taxation," in Annals of the American Academy of Political and Social Science 153:II (May 1931), p. 42.

commuting distance.[70] Planners began to address the methodological problems of managing

urban 'regions.'

The pressures exerted on the planning profession in the 1920s to extend its view beyond

the jurisdictional limits of most cities were not wholly unprecedented. Examples of large scale

urban planning dated back to the nineteenth century. By 1889 Boston had already established its

Sewerage Commission followed in 1895 by a Park Commission and finally in 1919 by a

consolidated Metropolitan District Commission with jurisdiction over water, sewer, and park lands

in and around the city.[71] In New York City, proposals for a consolidated Port Authority appeared

in 1903 vesting in one agency the control of the transportation and shipping activities around the

New York City Harbor and in both the state of New York and the adjacent state of New Jersey.[72]

Moreover, the methods of statistical analysis, engineering of infrastructure and land regulation

such as zoning pioneered over the previous three decades were still applicable over the distances

which planners now confronted. Indeed, most planners regarded regional planning as merely an

expanded form of city planning.[73]

What was unique about regional planning, however, was the new degree of integration to

which planners aspired in their efforts to coordinate territories stretching from city to country. In

part, this was necessitated by the interdependence which existed between the city and its

surrounding regions brought on by, for example, the expanding network of roads for automobiles

as well as the demand by new suburban developments for utilities. By the early 1920s, large urban

industries with operations dispersed throughout these regions sought out a "more unified

governmental organization with which to bargain" for utilities, services, road extensions and

determinations on land use controls. Regional planning, therefore, did not merely focus on an

individual problem of regional infrastructure as the earlier authorities or metropolitan district

[70] George Ford, "Regional and Metropolitan Planning: Principles, Methods, Cooperation," prepared for National Conference on City Planning, Baltimore, MD, April 30 - May 2, 1923, Special Collections, Harvard University, Loeb Library, VF NAC 6100 (unpaginated).
[71] Ibid.
[72] Carl Condit, The Port of New York (Chicago, 1981), pp. 122-40; Lewis, p. 185.
[73] Boyer, p.173.

commissions had. Planners anticipated bringing a structural and organizational consistency to a broad territory in which no such order or institutional framework had previously existed.[74]

In the past, successful efforts to integrate urban regions had relied on the ability of urban government to annex those areas into which its population, infrastructure, and economic institutions had extended themselves. In return for their accession to the control of urban government, outlying communities received the benefit of municipal services which they might otherwise have been unable to procure. This acquisition of new territories had inspired urban leaders to think in more comprehensive ways about the organization of the city, coordinated from the dense metropolitan core. In 1889, for example, Chicago annexed large areas whose presence within the urban perimeter inspired the large scale planning venture that resulted several years later in the Burnham Plan.[75]

But the opportunities for cities to annex territories diminished in the early twentieth century. Suburban communities, occupied by former urban dwellers who had left the city to avoid its conditions of overcrowding and social unrest, resisted inclusion in the larger urban domain. The public distaste for 'boss' rule and flagrant corruption fed the antagonism between 'town' and 'country' and played an important role in restricting the growth of large American cities. The inability of city governments to annex adjacent communities prevented them from controlling the territories into which their urban populations were moving and from which they would return daily for work. Thus, the relationship between places of work, housing for labor, and the transportation networks linking them fell outside of the control of normal city planning. In 1924, a planning advocacy group in Philadelphia described this situation by noting that, "planning for the city within its own political limits has proven to be insufficient."[76]

Planners seeking to establish order over these expanding urban functions regarded the inability of cities to impose political control over territory into which their infrastructure and

[74] Ibid., p. 169-70; 180-81.
[75] R.D. MacKenzie. The Metropolitan Community (New York, 1933), pp. 214, 308-9; Scott, p.174-5; 356.
[76] City Club of Philadelphia, "A Regional Plan for the Philadelphia Metropolitan District," in City Club News III (22 November 1924): p.9; MacKenzie, pp. 214, 308-9; Boyer, p. 185.

populations were moving as a fundamental weakness of American urban government.[77] "The

political boundaries of a city lag behind its economic boundaries," the Philadelphia group

continued. They went on to describe a new type of planning.

> The only solution for the common problems of such a metropolitan area is
> through the application of city planning methods in the development of a regional
> plan. Regional Planning and central control properly conceived and directed
> usually will prove a satisfactory and advantageous substitute for such
> annexation.[78]

In substituting itself for a consolidated and centralized network of government, regional

planning confronted both the technical problems of city planning and the political task of finding

consensus among a diverse constituency. In 1926, Charles Beard observed that regional planners,

by virtue of their attempts to step beyond the limits of existing municipal government, were

compelled to seek out favorable alliances with powerful groups whose interests coincided with the

goals of the plan. Beard held out hope that this exercise could be conducted with scientific

precision, first by identifying those "economic interests" best served by regional planning and then

by enlisting their help in mobilizing the disparate communities to implement regional planning

proposals.[79]

This was not the view, however, of Frederick Ackerman whose assessment of special

interest politics and its effects on planning were less sanguine. In an article in the AIA Journal,

Ackerman described the imminent failure of any planning venture which predicated its success on

a political formula.

> The inclusion of considerations of "expediency" among the "fundamental
> principles" which...are to be used in the work of stimulating the public opinion,
> lifts the entire activity right out of the field of scientific research and investigation
> and lodges it in the field of politics....any scientific study of causes cannot properly
> be rated as such so long as it takes possible political consequences into account in
> the formulation of its conclusions.[80]

Ackerman pointed to a persistent problem which the planning profession confronted, namely that

in their efforts to generate support for their ideas, planners corrupted their discourse by tailoring it

---

[77] MacKenzie, pp. 214, 308-9.

[78] City Club of Philadelphia, "A Regional Plan," p. 9.

[79] Charles Beard, "Some Aspects of Regional Planning," American Political Science Review XX (May 1926):
p. 278; Boyer, p. 186; Scott, p. 220.

[80] Ackerman, "City Planning Movement," p. 520.

to the interests of the politically powerful. Thus, the 'political' demands of implementation

derailed the autonomous or 'scientific' aspects of the planners' intellectual program, rendering their

knowledge-base ideological.

The Regional Plan Association and the "Regional Plan of New York and Its Environs"

Within the early 1920s a number of regional planning commissions were formed whose

mission it was to implement large scale and coordinated planning measures within cities and their

surrounding territories. Describing the rise of regional planning in 1923, George Ford named 11

cities which had undertaken such a planning enterprise. In the larger urban territories, these

efforts were diffuse and bore no precise political or legal form through which regional

development could be controlled. In Los Angeles and Chicago, for example, regional planning

advocates organized conferences through which they hoped to attract attention and support for the

idea of large scale planning. By the time of Ford's article, both the Los Angeles County Regional

Planning Conference organized by Gordon Whitnall and the Chicago Regional Planning

Association founded by Graham Taylor were publicly committed to bring order to their

metropolitan regions. But because of their non-official status, both groups found their options

limited to the sponsoring of public symposia through which they hoped to proselytize regional

planning among the public and attract the support of powerful special interest groups.[81]

In 1922, the New York businessman and member of an advisory committee on the New

York City Plan, Charles Dyer Norton, founded a similar group in that city committed to

establishing a planning standard over the whole metropolitan region. According to Mel Scott,

Norton's frustration over the inability of the City Plan to encompass a meaningful area comprised

of the city and its outlying regions inspired him to conceive of a privately financed organization

whose purpose would be to propagandize the regional planning motif.[82] From the outset, Norton

---

[81] George Ford, "Planning Principles" (unpaginated); see also Scott, pp. 204-10.

[82] Norton, a former Chicago resident, had been a member of that city's Commercial Club and an aggressive supporter of Burnham's work on the city plan. Norton's affiliation with the Burnham is significant because it underscores two fundamental similarities between his efforts in New York and the work of the Commercial Club in Chicago. First, both plans were initiated by influential citizens whose political and economic clout gave substance to their efforts. Second,

imagined a precise role for architecture as a medium through which to communicate the proposals

of his Regional Plan Association (RPA) and to make popular appeals to its audience. We will

focus attention primarily on the RPA, whose influence on American architects conjuring images of

the future city was profound.[83]

Under Norton, the RPA appointed as its coordinator Thomas Adams, an Englishman and

planner who had worked with the Canadian Commission of Conservation in the development of

industrial towns. Adams had been an early advocate of regional planning. Around 1919, in the

face of what he regarded as the disorganized migration of industry from the city to rural areas,

Adams suggested a new model of planning that was far more comprehensive than any that had

existed before. Regional planning, he had asserted in a series of influential articles on the topic,

began with the largest possible territory superseding the divisions of towns, villages, or cities.

After careful consideration of the region's topographical features, natural resources and climate,

the regional planner could begin to layout roads and utilities, and locate industry and housing.

Advocating the Garden City model, Adams envisioned a development pattern characterized by

small communities intimately connected to the natural environment, dispersed throughout each

state and separated by an open and rural terrain. Charles Whitaker, an ally of Adams before he

began his work with the RPA, described this planning model by noting that the regional planner

must, "aim at making individuals more socialized and communities more individualized."

---

architecture was an important means of communicating the plan's intent to the public and generating enthusiasm for it.
See Boyer, p. 123; Scott, p. 177.

[83] Architects involved with the Regional Planning Association of New York were: Committee on the City Hall
and General Plan of Manhattan - Cass Gilbert (Chairman), Welles Bosworth, Guy Lowell, Lawrence White; Committee
on East Side Waterfront - D. Everett Waid (Chairman), Chester Aldrich, John Cross, William Delano, Frederick Hirons,
Henry Hornbostel, Egerton Swartout; Committee on 59th Street and Traffic Studies - H.W. Corbett (Chairman), William
Boring, Arnold Brunner, Burt Fenner, Charles Platt; Committee on West Side Waterfront - Thomas Hastings
(Chairman), Donn Barber, Charles Butler, John Russell Pope. Also involved were Grosvenor Atterbury, Frederic
Bigelow, John Taylor Boyd, Henry Dumper, Hugh Ferriss, George Ford, Maxwell Fry, William Gehron, Eric Gugler,
Arthur Holden, Electus Litchfield, Thomas Newton, Bruce Rabenwold, Perry Coke Smith, Francis Swales. Adams,
Building the City, p. 327-28.

[84] Published as Thomas Adams, "Regional and Town Planning," American City Magazine 21 (July 1919): pp.
4-6; see also Thomas Adams, "Industry, Homes and Architecture." AIAJ 7 (December 1919): pp. 512-18; and Boyer, p.
174. Morris Knowles suggests that Adams introduced Regional Planning as early as 1916. See Knowles, "Engineering
Problems of Regional Planning," in Proceedings of the National Conference on City Planning, October 21 1919, p. 1-3.

[85] Adams, "Regional and Town Planning," pp. 4-6.

[86] Charles Whitaker, "Straws and Shadows," AIAJ 7 (December 1919): pp. 505-9.

Expressed in this way, regional planning offered a vehicle for social change, implicitly rejecting the large and impersonal scale of urban politics and the economic institutions underlying urban life.

But, it was in Adams' work for the RPA that he became an advocate for planning models that represented their strengths by virtue of their ability to preserve rather than change the existing economic institutions and which were intended to facilitate the growth of urban infrastructure already in place.[87] The RPA's "Regional Plan for New York and Its Environs" developed between 1922 and 1931 placed great emphasis on both industrial development and the stabilization of land values.[88] Adams' planning proposals upheld the primacy of New York City over its surrounding terrain.[89] He held to the agenda of urban expansion and aspired to a planning model that encouraged a more intensive use of land. Through the RPA publications, Adams advanced the idea that the congestion and reckless overbuilding evident in New York in the 1920s were not examples of fundamental flaws in the pattern of urban development but rather were the results of inadequate management. "The evils of congestion have accompanied standardization in industry and skyscraper building in New York," Adams observed. "But that is not due to inherent defects in either but to failure to arrest the abuses that are bound to grow up with such great changes in methods of production, building and transportation as have taken place in the last generation....What has to be done is to plan toward higher efficiency in use of these methods."[90] Thus, regional planning as conceived by Adams and the RPA was not an opportunity to reform the social matrix and physical constitution of the region but rather provided a means of increasing the efficiency of urban growth.

Adams' planning strategies drew sharp criticism from Charles Whitaker and the group affiliated with the AIA Committee on Housing and Community Planning. In 1922, several members of the Whitaker group collaborated in the formulation of a report on regional planning

[87] Boyer, pp. 171-99. See also Tafuri, "Disenchanted Mountain," pp. 431-47.

[88] See David Johnson, "The Emergence of Metropolitan Regionalism: An Analysis of the Regional Plan of New York and Its Environs" (Ph.D. diss., Cornell University, 1974). See also Adams, Building the City, p. 81; Tafuri, "Disenchanted Mountain," p. 436; Boyer, p. 183.

[89] For example, the RPA rejected the rights of communities to claim political autonomy through incorporation. Regional Plan Association, Graphic Regional Plan (New York, 1929), p. 165.

[90] Adams, Building the City, p. 67.

for the New York State Reconstruction Committee headed by Clarence Stein and set the stage for

their contentious relations with Adams. Stein wrote that regional planning should, "not aim only at

urbanizing the whole available countryside; it aims equally at ruralizing the stony wastes of our

cities."[91] But, it was Lewis Mumford who most aggressively attacked Adams' work with the RPA

as, "an attempt to promote better living conditions by costly plans for more traffic, higher buildings,

increasing land values, more intensive congestion."[92]

As Tafuri points out, Adams criticized the alternatives proposed by Mumford and

Whitaker in his response to their attack, calling it "despotic" because of their desire to remove

control over urban development from the private sector and make community building the sole

responsibility of the state.[93] In 1931 Adams described his alternative view.

> In all government control of private enterprise in building as in other things the
> aim should be toward preservation of liberty in the broadest social sense, which
> means liberty for reasonable enjoyment of life as well as to obtain reasonable
> protection of interest in property.[94]

In contrast to his earlier positions, Adams now suggested that the rigorous replanning of economic

and political institutions which he himself had proposed in 1919 were excessive and, moreover,

impractical in light of the dilemmas of implementation that regional planners confronted.

Consistent with the conclusions reached by Beard in 1926, Adams advanced the idea that the

success of regional planning depended on the effectiveness of its appeals to the economic interests

of its audience. As a result, the RPA's brand of regional planning took on the complexion of

voluntarism: the RPA offered itself as a quasi-governmental entity whose disciplinary role --

devising zoning guidelines, defining vital services, mapping out utilities and roadways, locating

airports and other terminals -- would return the benefits of greater order and efficiency to those

who voluntarily abided by its determinations.[95]

---

[91] C. Stein, Commission Report of the New York State Committee on Reconstruction (Albany, NY, 1926), p. 65.

[92] L. Mumford, "Realities and Dreams," AIAJ 13 (June 1925): pp.198-9; on this criticism and Adams reply see also Tafuri, "Disenchanted Mountain," p. 446.

[93] Adams, "Communication: In Defense of the Regional Plan," New Republic 71 (July 6, 1932): pp. 207-10; Tafuri, "Disenchanted Mountain," p. 446.

[94] Adams, Building the City p. 153.

[95] Ibid.; Tafuri, p. 439; Boyer p. 173.

This motif was characteristic of regional planning efforts throughout the United States. Regional planners endeavored to find a set of common interests manifest within a region which could be used to overcome the local preoccupations of the inhabitants of diverse political dominions and which would encourage voluntary acceptance of the regimen of regional planning controls. This had been the purpose of the "Regional Conferences" sponsored in Los Angeles and Chicago in 1922 and 1923 where planning advocates encouraged the formation of a regional "consciousness" as people collectively confronted large scale problems. "The whole intent of the commission's educational program," Hugh Pomeroy wrote in reporting on the Los Angeles Conference of 1922, "has been to secure that unity of metropolitan consciousness, that conception of the task of adequate planning for the future and that willingness to work together that will carry forward a great and fundamental program."[96]

In Los Angeles, however, the immediate need of a consolidated flood control and storm sewage system gave support to the idea of a regional authority (fig. 4.37). In New York, the means by which this consensus could be reached were less evident. Planners confronted an area of 5,528 square miles traversing three states (fig. 4.38). As Herbert Hoover observed, in New York, regional planning was as much an effort to identify regional problems as it was an effort to solve them.[97] For this reason the New York Regional Plan was susceptible to the agenda of political expediency about which Ackerman had warned planners. Despite the pretense to a disinterested accounting of the urban situation conveyed by the volumes of information accumulated in the RPA's surveys published at intervals throughout Adams' tenure as director, its Graphic Regional Plan published in 1929 and the subsequent The Building of the City by Adams published in 1931 are filled with an imagery intended to project a bright future for land development in the city and its region. Emphasizing the necessity of centralized planning organized through the city itself, both the RPA and Adams made appeals on the Plan's behalf on the basis that the economic health of

[96] Hugh Pomeroy, "Regional Planning in Progress: First Annual Report of the Los Angeles County Regional Planning Commission," Proceedings of the 16th National Conference on City Planning, p. 2.

[97] "The Survey can help arouse a consciousness of its needs on the part of each community and group within the whole territory." Hoover quoted in "Plan of New York and Its Environs," Minutes of the First RPA Meeting, May 10, 1924, New York City.

the outlying regions would rise and fall with that of New York City.[98] As a consequence,

Mumford's reaction to the Plan was not so damaging. Indeed, to whatever extent the Plan did

convey the sense that it provided for higher land values and more building it succeeded in making

tangible its promises of preserving the economic viability of the city and hence the region.[99]

Both the Graphic Regional Plan and The Building of the City contained graphic images

which served to reinforce the perception that the Regional Plan of New York would ensure the

viability of urban real estate markets. To document its case, the RPA included in its Graphic

Regional Plan photos documenting the existing congestion and the comments of business leaders

such as Irving Bush, head of Bush Terminals, who advised that impediments to traffic would result

in the "death of the city" due to the increases in the cost of doing work that it provoked (figs. 4.39,

40).[100] Contrasting these depictions of present-day dilemmas, the Plan included the tantalizing

proposals of, among others, Harvey Wiley Corbett. As Chairman of the RPA's Committee on

Transit in 1924, Corbett engaged Hugh Ferriss to prepare drawings describing a double-decker

traffic system using arcades and bridges as a means of increasing the street capacity and separating

pedestrian, vehicular and rail traffic (fig. 4.41, 42). Thus, the Plan portrayed both problems and

solutions, a method which gave its argumentation a transcendent finality even despite Adams'

persistent claims for the on-going nature of planning.

Although the Regional Plan described the strategies proposed by its members such as

Corbett as methods with which to overcome present dilemmas such as traffic congestion, it is clear

from Corbett's other work that his goal was to create a positive climate for future growth and

building. Thus, there existed an implicit connection between the skyscrapers that he and other

architects envisioned for the city and the tactic of proposing to increase the carrying capacity of the

---

[98] Adams, Building the City, p. 45.

[99] David Johnson suggests that the Plan offered a program of relief from urban congestion that might otherwise threaten the potential for further development in the city center. Johnson, "Metropolitan Regionalism." One can judge the Plan's success by the frequency with which it was invoked as evidence of the city's financial future. In 1930, for example, the advocates of urban real estate speculation, W.C. Clark and J.L. Kingston, used the Plan to demonstrate that New York City could continue to expand as a center of industry, finance and culture. See, Skyscraper, p. 74-75. This book was compiled for the American Institute of Steel Construction (AISC).

[100] Committee on the Regional Plan of New York and Its Environs, The Graphic Regional Plan (New York, 1929). p. 143.

existing transportation infrastructure. As he would later write, his approach to urban design was straightforward.

> ...city planning (is) the study of the city's proper growth, and with this in mind [I]
> have set down these limitations as [those which], after very careful study seem to
> be a basic method of procedure:
> 1. Increase in population and bulk of buildings, which is both necessary and desirable.
> 2. fast movement of traffic of all forms, which is essential to healthy growth.[101]

Other advocates of continued building at the urban core joined with Corbett in their endorsement of improved traffic systems. In his popular autobiography, William Starrett added,

> Good thoroughfare arrangement with due regard to ease of swift movement from
> place to place goes hand in hand with increasing construction.[102]

The inspirations for Corbett's proposals are diverse. In some of his earliest writing on the proposed revisions to the New York street system, he spoke of the city as a modern day "Venice" with bridges overarching streets, arcades, "with canals for streets, only the canals will be filled not with water but with freely flowing motor traffic, the sun glinting on the black tops of the cars and the buildings reflecting in this waving flood of rapidly rolling vehicles."[103] Corbett's ideas for two level streets had several more recent American precursors. In 1910, the railroad executive, Frederick Delano, had suggested "basket-weaving" the north-south routes through Manhattan in order to speed movement.[104] Nelson Lewis proposed continuous high-speed streets to go around the perimeter of Manhattan in 1923.[105] While working with the Regional Plan Commission, Cass Gilbert made more conventional solutions for diagonal boulevards, a scheme which recalled proposals by Julius Harder in 1898 and later by the New York City Improvement Commission in 1907.[106] Corbett may also have drawn inspiration from recent publications such as that of Hegemann and Peets who discussed the separation of pedestrian and vehicular traffic in their text,

---

[101] H.W. Corbett,"The Problem of Traffic Congestion and a Solution," AF 46 (March 1927): pp. 200-8.

[102] William Starrett, Skyscrapers and the Men Who Build Them (New York, 1928), p. 337.

[103] H.W. Corbett,"Different Levels for Foot, Wheel and Rail," American City Magazine 31 (July 1924): pp. 2-7.

[104] Frederick Delano article in Glenn Brown, ed., The Relations of Railways to City Development (Washington DC, 1909).

[105] Adams, Building the City, p. 300.

[106] Ibid., pp. 307-10; Scott, p. 57.

The American Vitruvius: An Architects' Handbook of Civic Art (New York, 1922), and called

attention to examples taken from European cities (fig 4.43) They also showed American examples

as in projects such as McKim, Mead and White's Pennsylvania Station and Forest Hills Gardens by

Grosvenor Atterbury (figs 4.44, 45).[107] Other extant buildings were frequently cited as examples

demonstrating the principle and feasibility of separating traffic. Grand Central Station, whose

double layer of tracks beneath Park Avenue was first proposed by William Wilgus in 1899 and

carried out by the New York Central Railroad between 1899 and 1928, was a noted example of a

multi-tiered traffic system (fig. 4.46a, b).[108] Writing after Corbett had made his original

proposals, William Starrett suggested that in the train station, traffic was "carried through a great

building above grade for the first time in history" (fig. 4.47).[109] It is also significant that in 1921 the

AIA Journal published a review of the "linear city" proposals by the Spanish planner, Arturo Soria

y Mata, which described a communal development occurring alongside a circulation route.[110]

Corbett's work fit within a context of other similarly spirited proposals. The RPA

documented the scheme by Ernest Flagg in which the urban road system was divided on two levels

with structures resembling elevated rail lines (fig. 4.48). In 1928, New York City's Committee on

the Regional Plan and Survey made the extravagant recommendation to cover the East River with

a roadway and a new civic center (fig. 4.49).[111] Proposals elsewhere in the United States were

made such as a double deckering scheme for Chicago which appeared in the same year (fig. 4.50).

In his The Building of the City, Thomas Adams identified other prominent examples including

Wacker Drive and Michigan Avenue in Chicago (fig. 4.51).[112]

[107] Werner Hegemann and Elbert Peets, American Vitruvius: An Architects' Handbook of Civic Art (New York, 1922), p. 197.

[108] On the proposals for New York Central Station, see Condit, New York, p. 60; Nelson Lewis discussed this project as an example of both a large scale intervention and a use of multi-level traffic circulation. Lewis also described the notion of separate levels for railroad and automobile traffic in illustrations of less densely populated areas where he felt that the strategy might also be applied. Lewis, pp. 155-6.

[109] W. Starrett, Skyscrapers, p. 107.

[110] Edith Elmer Wood, "The Spanish Linear City," AIAJ 9 (May 1921): pp. 169-74.

[111] John Harris, "Report of the Subcommittee on Traffic Regulations and Street Uses." in M.O'Brien et al, Report of the City Committee on the Plan and Survey (New York, 1928).

[112] Adams, Building the City, pp. 276-90.

Corbett's scheme was notable, however, in the way that it called for a gradual introduction of separated traffic. The Ferriss illustrations prepared for the RPA document and which appeared in the magazine, Pencil Points, in 1927 depicted a slow transformation of the city fabric as the elevated walkways, initially attached to the sides of existing buildings, were incorporated into the body of new buildings whose form was legislated by a zoning law (fig. 4.52-59). Thus, Corbett demonstrated his fundamental conviction in systematic and gradual intervention, a mode of urban reform intrinsic to the methods of zoning which took its effect gradually as new construction displaced the old. In contrast to this, the methods of White City had foretold immediate and apocalyptic change brought about by direct intervention sponsored by publicly financed building campaigns.

Like the elevated roadway, the arcades which Corbett proposed were not unprecedented. Hegemann and Peets had documented arcades in numerous European and American examples (fig. 4.60-62,63a,63b).[113] Their advocacy of arcades, however, had more to do with a desire to tie disparate elements of the city together. Corbett had also written of the aesthetic benefits of visual integration of the bases of highrise buildings (figs. 4.64-66).[114] But, in his proposals for the renovation of streets, the primary function of these elements was to increase their ability to carry traffic. This function was exemplified for Corbett by at least one extant urban highrise: Walker's Barclay Vesey Building. Seeking to avoid condemnation of its property in the cause of the city's street expansion program, the New York Telephone Company, which owned and occupied the building, agreed to incorporate a public walkway at its base. The political success of this strategy owed much to Arthur Tuttle, City Engineer, whose advocacy of arcades as a means of relieving congestion around tall buildings had also been an encouragement to Corbett.[115] As early as 1924, Corbett published an article in American City Magazine in which he discussed the strategy of separating pedestrian and vehicular traffic. With that piece, Corbett included a drawing prepared by Walker for the Barclay Vesey Building showing an arcade at its lower level described as having

[113] Hegemann and Peets, p. 112, 189.
[114] Corbett, "High Buildings on Narrow Streets," AA 119 (8 June 1921): pp. 603-8, 617-19.
[115] Adams, Building the City, p. 291.

been intended as a resolution of the dilemma of an inadequate street width (figs. 4.67, 68).[116] The resemblance to the Corbett depictions was unmistakable (figs. 4.69, 71).

In Corbett's depictions of the revised street configuration, the multi-tiered formula and the proposed use of arcades were intended as a means of extracting greater levels of efficiency from the existing urban transportation infrastructure. Yet, at the same time that these images were compelling for their depiction of a rational reconfiguration of the street system, they remained a part of an extravagant dream whose principle purpose was to encourage belief in the potential for further urban growth. Corbett's proposals duplicated in a smaller and more graphic version the rhetorical imagery present in the RPA Plan. By proposing to institute a centralized planning mechanism over the city and its suburbs, the Plan foretold of a new era in which methods of urban speculation could be applied systematically over the whole terrain. "One value of regional as distinct from city planning," Adams wrote in 1931, "is that it brings into consideration a sufficiency of open area surrounding the congested centers to give all the space that is needed for an efficient distribution of land uses."[117]

The RPA Plan offered two strategies for accessing this new terrain. On the one hand, it called for an integrated transportation network making movement throughout the region easier by extending and enlarging the existing network to create an interwoven fabric of radial and circumferential routes -- a strategy similar to Corbett's reformation of the urban street (figs. 4.71-73). On the other hand, the Plan proposed a comprehensive zoning ordinance which utilized the whole region, "recentralizing" industry, housing and commercial functions in huge districts more rationally disposed in relation to transportation and utilities (figs. 4.74, 75).[118] The diagrams within the plan which explained these concepts of reorganization themselves conveyed the sense of rational control and greater efficiency in land use that the Plan was intended to achieve.

---

[116] Corbett, "Different Levels," p. 6.

[117] Adams, Building the City, p. 84.

[118] RPA, Graphic Regional Plan, p. 325. It is important to note that the RPA called for zoning statutes that envisioned a regional hierarchy surmounted by the city. Adams attempted to justify the creation of these zones, whose size frequently bore little relationship to actual need, by suggesting that they decongested the central city. But, as Christine Boyer has suggested, zoning statutes applied to the region extended the domain in which real estate investment was protected and encouraged speculation at the regional rim away from the expensive and congested urban core. See Boyer, pp. 171-99.

Adams was aware that by proposing to reorganize urban activities over this large terrain,

regional planning disrupted the spatial continuities between, for example, places of work and

residential areas which had been so central to the Garden City agenda he had formerly embraced.

To overcome this "lesion" he advised that the Regional Plan assume yet another task for its

rhetorical imagery, conjuring what he called a "Regional Patriotism" that gave testament to the

city's authority as the pre-eminent center of the region. "Whatever local affiliations a citizen may

have he will not question that the cement that gives a structural unity to the diverse political

neighborhood elements of the Region is the power and influence which fortune and tradition have

given to New York," Adams wrote in The Building of the City.

> In recent years...a definite regional consciousness has grown up. This has brought
> together citizens of hundreds of separate communities with the common idea that
> the metropolitan center of New York and New Jersey is more than a political
> structure....Its unity around the harbor of New York is strong enough to rise
> above separate state consciousness and to force cooperative treatment of certain
> of its regional problems.[119]

Within "Regional Patriotism" resided an ideological program -- one not anticipated by Beard --

whose purpose was to prepare individuals to think in new terms of territorial allegiance.[120]

The visual imagery within the RPA's publications supported both the premise that proper

planning demanded a "regional" solution and that the physical and spiritual center was New York

City. The road system, for example, provided access around the perimeter of the region without

requiring movement through Manhattan. While the form of this transportation network

dominated the territory around the city by its presence, it also reinforced the authority of the city

as the physical center. The RPA pursued the iconography of this radial geometry further when

they proposed amending the idea of concentric 'greenbelts' so vital to the Garden City concept with

that of "wedges" of green space extending out from the urban core and situated between major

---

[119] Adams, Building of the City. p. 122.

[120] Ibid. p. 126. The aspiration to form a regional "consciousness" permeated the doctrine of Regional Planning. Discussing the role of public information in the work of the Regional Planning Commission of Los Angeles Hugh Pomeroy reported that, "The whole intent of the Commission's educational program has been to secure that unity of metropolitan consciousness, that conception of the task of adequate planning for the future and that willingness to work together that will carry forward a great and fundamental program." Pomeroy, "Regional Planning." p. 2.

transportation corridors.[121] Rather than isolating urban centers by encasing them in open

parkland as Ebenezer Howard had suggested, the "wedges" adorned the linear development

radiating from the city.[122] To mark the points of intersection of the circumferential and radial

transportation routes, Adams proposed "nerve centers" well distributed throughout the region

combining industry, business, housing, recreational and educational facilities whose location was to

be determined by the regional infrastructure rather than by the presence of communities or

conditions of topography. Thus, Adams depicted a pattern of urban growth in which the new focal

points of regional development would coincide with a superimposed matrix whose spiritual origin

and physical center was the city, an image that offered a visual corollary to his proposal for a

rhetoric cultivating a regional patriotism.

Adams spent time defining the character and role of his regional centers. He began by

arguing that merely by articulating these points on the regional infrastructure they contributed to

its efficiency as a transportation system.

> The terminal and distributing facilities in this system constitute what Wells once
> called the "knots of the network." Congested arteries of travel and the existence
> of whirlpools of traffic are perhaps more the result of absence of bold treatment
> of the focal points in the system of circulation than of the lack of system and
> coordination in the lines of transportation.[123]

He then offered examples of such focal point, proposing buildings which were visually dominant in

their context and capable of drawing attention to the "lines of transportation" whose intersections

they marked. The proposed Staten Island Ferry Terminal and Office Building, for example,

appeared in The Building of the City (figs. 4.76, 77). William Wilgus' scheme for a causeway

connection across New York Harbor was also illustrated in the RPA publications and was similarly

adorned with tower-like elements whose vertical prominence against the horizontal water surface

was only slightly modulated by the tower's tapered form (figs. 4.78, 79). Located at the point of

transition between the over-water road and a tunnel, these towers also marked an intersection

---

[121] RPA, Graphic Regional Plan, p. 316; Thomas Adams, "Reserving Productive Areas Within and Around Cities," AIAJ 9 (October 1921): p. 316.

[122] This may have provided the inspiration for Raymond Hood's projects, "Manhattan 1950" in which towers adorn the circulation systems including bridges which radiate out from the urban core. See Robert Stern et al., Raymond Hood (New York, 1982), p. 74-75.

[123] Adams, Building the City, p. 222.

within the transportation network. One of the clearest expressions of Adams' imagery was a tower

for Queen's Plaza by Arthur Holden which Adams included in The Building of the City (figs. 4.80-

82). This image combined both the references to an extensive transportation network, represented

by the intersecting automobile, rail and subway lines, and the prominent tower-like element

housing office space.

In its recessing form, the Queen's Plaza Tower also monumentalized the zoning

ordinance; thus, the tower conveyed both the symbolism of the articulated "nodal point" depicting

an extensive transportation network and the message of territorial organization manifested in

regional laws. The meanings conveyed by the notion of a regional zoning ordinance are also

shown, as Tafuri has noted, in the RPA's proposals for volume restrictions on buildings situated at

various distances from the urban center (figs. 4.83, 84).[124] In these proposals, the pretense,

implicit within the idea of an extensive ordinance, of an overarching legal authority emanating

from the regional center coincided with a visualization of the regional hierarchy depicted by

maximum building envelopes whose sizes decreased toward the periphery.

These overlapping iconographies are central to the message embedded within the Plan:

whereas the image of the tower and road system recalls the planning program outlined by Corbett

which called for improvements to the transportation network as a means of expanding the potential

for new and denser building at the urban core, that same imagery recurred in Adams' writing as

manifesting the combined action of new circulation routes and new zoning ordinances with which

to decongest the center city. Adams wrote, for example, that the "diffusion" of buildings and

population throughout the region that occurred naturally as a result of the urban dwellers seeking

the amenities of suburban environments could be aided by the planner.

> The push may be given by combining adequate zoning control to prevent
> excessive bulk of building in the central districts with proper measures to extend
> the transit facilities into undeveloped districts.[125]

Thus, the graphic elaboration of zoning and transportation within the Plan simultaneously

drew attention to the city center as the focal point of a great region at the same time that it placed

---

[124] Tafuri, "Disenchanted Mountain," p. 432.

[125] Adams, Building the City. p. 142.

276

emphasis on the expanding perimeter. The spirit of "Regional Patriotism" which these images were intended to encourage ideologized a strategy of planning that pushed the territorial limits of the city, that aspired to a spatial order over large regions, that was pervasive, and hermetic in the degree to which it precluded any inflection of the man-made fabric in deference to local variations of topography or culture.

Architecture and Regional Patriotism

Just as the charts and diagrams contained within the Regional Plan created an iconography which endorsed the planning strategy espoused by the RPA, so too did an architectural imagery emerge which sustained this approach to regional planning. Architects working with the RPA such as Corbett, Hugh Ferriss and Cass Gilbert applied their skills of depiction to the task of what Raymond Unwin called, the "envisioning" of the city. As their renditions of this new 'American' city proliferated between 1922 and 1931, they catalyzed a more broadly manifested movement among American architects toward a vision of a diffuse skyscraper city devoid of spatial definition which grew by "accretion," as Lewis Mumford noted, through, "the mechanical addition of blocks and avenues to the original center, proceeding automatically and without limit."[126]

Before proceeding to examine its novel aspects, it is important to recall, as Tafuri has remarked, that some of the architectural imagery which accompanied the Regional Plan borrowed from the heritage of the City Beautiful.[127] Following the model of Burnham's Chicago Plan, the Regional Plan proposed at first that prominent civic programs be housed in major urban buildings, frequently rendered in modern terms as a set-back skyscraper. Moreover, Adams argued that these tall buildings should relate formally to adjoining open spaces.[128] Thus, some of the architectural proposals of the RPA replaced the domed buildings of the White City with the tower-

[126] Lewis Mumford, "Realities and Dreams," AIAJ 13 (June 1925): p. 198.

[127] Tafuri, "Disenchanted Mountain," p. 441. Following the operational model of Burnham's Chicago Plan, Charles Norton's original proposal for the Regional Plan had called for the use of architectural renderings as a means of educating the public.

[128] Adams, Building the City, p. 103.

like presence of the skyscraper while maintaining the formal relationship between building and an open urban space.[129] Adams offered the Buffalo City Hall (by Dietel & Wade with Sullivan Jones), a set-back skyscraper form, as an example of both a "symbol of civic spirit" and as a "structural" element within the city capable of imposing a formal hierarchy on the urban fabric (fig. 4.85).[130] This imagery also recalled the White City-inspired urban depictions by Hegemann and Peets who proposed in their American Vitruvius a tower surrounded by an open plaza as a "Civic Center Group" (fig. 4.86).[131] They compared the model of the tower as an urban marker of civic institutions to American examples in Springfield, MA by Pell and Corbett and the proposed civic center in Rochester, NY by Arnold Brunner, Frederick Olmsted and B.J. Arnold (fig. 4.87, 88). The RPA documented similar projects including the Rockefeller Center (New York, 1930-7) by Hood, Corbett, et al, B.G. Goodhue's Nebraska State Capital (Omaha, Nebraska: 1920-32) and the Louisiana State Capital (Baton Rouge, Louisiana: ca.1930) by Weiss, Dreyfous and Seiferth (figs. 4.89, 90).[132]

Following this model, the Graphic Regional Plan contained a proposal for a new civic center for Manhattan's City Hall Park (figs. 4.91, 92). Prepared by Cass Gilbert and Francis Swales and first released through the AIA Public Information Committee, the proposal called for a massive highrise sporting set backs. The scheme demonstrated its White City heritage in its powerful relationship to the park on which it fronted over the roof of the adjacent City Hall.[133] Moreover, the alignments between the lower setbacks of the tower and the cornice lines of the adjacent Municipal Building by McKim Mead and White demonstrated the architects' desire to create a continuous wall containing the urban space between. Not only did this tower address the space immediately in front of it but it also conveyed its presence and the presence of the

---

[129] On civic groups see also Nelson Lewis, "The Common Sense of Civic Centers." American City Magazine 21 (July 1919): p. 6.

[130] Adams, Building the City, p. 127.

[131] Hegemann and Peets' proposal also included a double level traffic system with parking below this tower in its plinth. Hegemann and Peets, p. 148.

[132] Illustration in Adams, Building the City, p. 112; see also Tafuri, "Disenchanted Mountain," p. 437; Scott, p. 289.

[133] This configuration recalled that proposed in 1907 by Charles Mulford Robinson in his Report or the New York Improvement Commission (New York, 1907); see also Boyer, pp. 52-53.

institutions it contained over a huge territory, reinforcing its role as a purveyor of regional

patriotism. As Adams noted,

> It is essential in order to give proper emphasis to the municipal center of the city
> to erect one building that will not only fit in appropriately with its immediate
> surroundings but stand out alone as the dominant feature in the whole of
> downtown Manhattan.[134]

Thus, Adams revealed the two contexts in which this building was intended to be responsive, one at

its lower levels, formed by adjacent buildings, and the other cast over the broad terrain visible from

the tower's peak.[135] Capitalizing on the potent imagery of the massive tower as a new regional

focus, the scheme was published in the New York Times in 1930.[136] As if to further disseminate

the image of the tower as the seat of government, the RPA documented civic centers for Newark

and Patterson, New Jersey, in which the powerful imagery of the new complexes was reinforced by

the scenarios of "before and after," evidencing the apocalyptic sensibilities of "White City" planners

(figs. 4.93, 94).

In contrast to this example of the planning method which called for a structured

relationship between 'void and volume' and which was so vital to the White City paradigm, the

RPA documents also suggested enthusiasm for highrise buildings depicted as isolated towers. For

example, in The Building of the City Adams celebrated Walker's Barclay Vesey Building as one of

the many privately owned commercial buildings which made up the "memorable aspects" of the city

(fig. 4.95). Unlike the Gilbert/Swales tower whose form was riveted within the spatial context of

City Hall Park, the Barclay Vesey Building constituted its own compositional formula and revealed

a different conception of urban form. The powerful visual quality of an isolated tower set against a

---

[134] Adams, Building the City, p. 384.

[135] For some planners and architects the importance of these centers lay in the degree to which they reinforced the symbolism of the city as the center of political and cultural life. Tracy Augin, planning consultant for the city of Detroit noted that in an age of the automobile and in an era in which cities were losing population to the suburbs, the city's reach out to its constituency was an important means of maintaining its importance as the heart of its region. City centers were means by which cities could fight "like businesses for their patrons", advertising their presence by inventing imagery inspiring fidelity. Augin, "City Planning and Civic Progress," AF 55 (September 1931): pp. 265-72.

[136] "A Plan for the Concentration of New York's Municipal Government," NY Times (Jan. 12, 1930) Sec. 7 p. 5.

discordant background of adjacent buildings reappeared in another image contained within the

Regional Plan, the skyline depictions by Maxwell Fry of a future "City of Towers" (figs. 4.96, 97).[137]

As with Harvey Wiley Corbett's scenarios of urban change, Fry's images showed a gradual

transformation of the urban fabric quite different from the sudden 'before and after' views

characteristic of White City imagery. In part, this recurring motif demonstrated a fascination

among architects for the automatic and processal quality of urban reform brought about by zoning.

But, even architects and planners more pragmatic in their view and less prone to visionary

postulations than Fry or Corbett observed the tendency for slow change as an implicit condition of

zoning. For example, the architect and zoning pundit, George Ford, noted that the 'natural'

direction of urban growth under the influence of zoning was toward taller and more widely

separated buildings. This, Ford reasoned, was a consequence of the limits that ordinances placed

on the dimensions of towers, restricting the size of their floors to some percentage of the total area

of the building lot. Moreover, as Corbett observed, the maximum height of a skyscraper was a

function of a ratio between its gross floor area and the space required for mechanical services and

elevators: the larger its overall floor plate, the taller a building could be without compromising the

rental value of the space it contained. As Ford and others pointed out, these conditions prioritized

the quest for larger land parcels: in its persistent quest for larger and more voluminous buildings,

the development community would slowly accumulate bigger building lots through successive

generations of dismantling and reconstructing the city (fig. 4.98).[138]

To Thomas Adams as well as Fry and Corbett, this tendency had virtues of both an

economic and aesthetic nature, a position that Adams clarified in his favorable criticism of the

Empire State Building which appeared in The Building of the City (fig. 4.99). Having reasoned

that a taller, more slender office building would offer better return on their investment than would

---

[137] Adams, Building the City, p. 77; Tafuri demonstrates that this iconography is not wholly new. Indeed, the aspiration for isolated tower forms is presaged in the work of Louis Sullivan whose Odd Fellows Temple designed in 1891 had formal characteristics which resembled the setbacks of the zoning ordinance and a tower-like presence anticipating buildings such as Barclay Vesey. Tafuri, "Disenchanted Mountain," pp. 390-400.

[138] Adams, Building of the City. p.117. Adams equated these independent towers with churches against the skyline of the city; Boyer, p. 162; Harvey Wiley Corbett, "Zoning and the Envelope of the Building." PP 4 (April 1923): pp. 15-8.

a higher volume commercial and industrial 'loft' building, the consortium gathered behind Al Smith

had demonstrated, Adams argued, good economic sense and had contributed to the formal

evolution of this urban building type.[139] For Adams, the Empire State Building realized both the

model of an urban tower visible as an independent form within its context and the outcome of an

evolutionary process encouraged by zoning that was tending toward buildings of increasing

magnitude and height. Moreover, the Empire State Building validated the arguments of those who

embraced both the skyscraper and zoning by presaging an urban context that was less congested,

less overbuilt and less burdened by narrow and dark streets.[140] To these remarks Adams added

the terminology used by Corbett which described the urban highrise office building as a part of the

"machinery of business," and as a symbol of rational business management.[141] Thus, the Empire

State's "splendid isolation" depicted the fully manifested iconography of these urban towers which

contained an homage to rational management in business as well as urban planning. At the same

time, its visual presence on the skyline imposed this symbolism on a "regional consciousness" and

established a new basis for the formation of a "regional patriotism."

It is also clear from Adams depictions that in opposition to the tower as proposed by

Gilbert and Swales, a gradual pile ascending from its context and related to the spatial realm

through its alignments with adjacent buildings, the Empire State Building was anti-spatial. Adams'

willingness to accept this condition of the slender urban tower exemplified by the Empire State

Building was also revealed in The Building of the City. Six years after Gilbert and Swales had first

proposed their municipal center, Adams reworked the scheme with Francis Swales and proposed a

new building for the City Hall Park site whose configuration more closely resembled the Empire

State formula (fig. 4.100). "Its pinnacle should rise above all other structures," Adams remarked

about the scheme, reiterating the desire to reach the largest possible audience. But the message

this tower conveyed in its form was somewhat different from that of the earlier scheme. The great

height and narrow configuration which Adams and Swales now proposed offered a corollary to the

---

[139] See Chapter Four on the development of the plans for the Empire State Building.

[140] Adams, Building the City, p. 163.

[141] Ibid., p. 109.

drawings of the city by Fry: just as Fry's towers began to suggest that by accumulating larger

parcels of land it would be feasible to reach higher levels, so too did the City Hall tower step over

four city blocks. As with the Empire State, the scheme by Adams and Swales maintained little

relationship to its context: its setbacks no longer aligned with the cornices of the adjacent blocks

and its shaft rising abruptly from the city floor, Adams' scheme resisted spatial integration. Adams

reinforced the building's riveting iconic presence by disregarding its symbolic attachment to the

governmental programs contained within a "civic center." Adams wrote, "The largest skyscrapers

have all the scale and variety of uses of small cities." Thus, he aspired to liberate the building form

from its service both to urban space-making and to the task of monumentalizing government.

Indeed, the idea that the tower might contain an autonomous "city" further distanced the building

from its urban context.[142]

The imagery concocted by Adams and the RPA and included in The Building of the City

had currency among architects who similarly embraced the iconography of the urban skyscraper.

In 1930, for example, Architectural Forum featured articles by some of the best known American

skyscraper architects in which they expressed notions similar to those of Adams. Corbett, who

contributed an article, proposed that the skyscraper could contain a variety of functions organized

only by their vertical location within the building.[143] Ely Jacques Kahn, another well-known

skyscraper architect, advocated large buildings stepping over several blocks as a means of attaining

greater height and increasing the efficiency of construction.[144] Both Kahn and Corbett produced

designs for skyscrapers in Manhattan of great height and with a tower-like configuration. The

proposed Metropolitan Life Insurance Company Building by Corbett was 100 stories tall and

intended to house 30,000 workers (fig. 4.101). Kahn's proposal for a tower occupied a whole city

block (fig. 4.102).

---

[142] Ibid., p. 163; 109; 354; 384; 388.

[143] Harvey Wiley Corbett, "The Design of Office Buildings.=," AF 52 (June 1930): p. 779. Corbett also recommended "vertical zoning" to affix certain uses at specific heights. See also Corbett, "Skyscraper Garages and Congestion," AF 52 (June 1930): pp.825-26.

[144] Ely Jacques Kahn, "Civilized Architecture," AF 52 (June 1930): p. 785.

These "disenchanted" masses characterized a new urban configuration lacking both spatial hierarchies and any relationships between form and content.[145] Instead, they described the skyscraper as a container of space capable of sustaining what Kingston and Clark noted was "a bewildering variety of functions."[146] Fixated on these objects, architects abandoned -- as had Adams -- the aspiration to forge relationships across urban space. Preoccupied with the images of a 'regional' domain and the rhetorical program of regional planning, they now concentrated on the possibilities of a wider "diffusion" of their towers. For example, Ralph Walker advocated the dispersion of buildings beyond the city's immediate limits as the foci of new communities: in 1930, he envisioned "Garden Cities" spread over the countryside that were comprised of a single massive tower containing 50,000 inhabitants.[147] As Adams would later write,

> Mr. Walker put his finger on the point that always needs to be emphasized when he said that the solution of the problem of congestion was decentralization with more skyscrapers, that is with skyscrapers more widely "separated."[148]

Other architects envisioned similar urban scenarios. In 1929, one year before Walker's article appeared, Raymond Hood also proposed that highrises contain entire communities (fig. 4.103). Writing in the magazine Nation's Business, Hood suggested a vertical separation of uses that Corbett would later advance, reasoning that the lower ten floors could be devoted to shops, stores and theaters. Above these would rise offices to the twenty-fifth floor followed by another ten floors of clubs, restaurants and hotels with apartments above. The architect's biographer, Walter Kilham, suggests that Hood had been greatly moved by Le Corbusier's urban postulations and was well acquainted with his book, Ville Contemporaine (Paris, 1924). Hood's debt to Le Corbusier is evident, for example, in his insistence that the towers he proposed be elevated above the ground, only their structure and circulation passing to street level. As the caption accompanying Hood's illustrations explained, the "Whole ground area is free for traffic - for automobiles, pedestrians and parking. The buildings are supported on columns which have the

---

[145] Tafuri uses the term in his article, "Disenchanted Mountains."

[146] Clark and Kingston, Skyscraper.

[147] Ralph Walker, "The Relation of Skyscrapers to Our Life," AF 52 (May 1930): pp. 689-95.

[148] Adams, Building the City, p. 183.

space between them open. Only the stairways and elevator entrances come down to the street level."[149]

Yet, there are several important differences between the Hood scheme and that of Le Corbusier which demonstrate the unique aspects of the American version. In Hood's proposals, the towers are emphatic vertical statements similar in a fashion to his earlier Gothic-inspired solutions to the highrise, such as the American Radiator Building. As Walker's article would later suggest, these buildings stood as isolated objects, their round profiles precluding the cartesian relationships with one another that existed in the Corbusian image. Hood desired to reinforce this formal separation by insisting that each tower, though sufficiently large to contain many corporate entities, should be developed by a single financial syndicate, a strategy intended to increase the efficiency of the building's production by consolidating the management process. In contrast to Le Corbusier's collage renderings that showed, for example, his Ville Voisin (1925) superimposed on the cityscape of Paris, Hood took a more measured approach, proposing that his "City of Towers" be implemented gradually into the fabric of the existing city (fig. 4.104). Predictably, the mechanism for this transformation of the city was a zoning ordinance which limited the coverage within the urban environment to a twelve to one ratio of lot area to building footprint.[150]

Hood's model of a decentralized tower city may already have been suggested in several realized projects by Ralph Walker for the New York Telephone Company. Beginning in 1923 with his Barclay Vesey Building, Walker completed projects for this client throughout lower Manhattan such as the Telephone Buildings at 60 Hudson Street or 140 West Street, creating what W. Parker Chase later called "Telephone City" (figs. 4.105-8).[151] Each of these buildings bore a stylistic similarity due to Walker's characteristic use of brick and stone detailing, ornamental plant forms cut in intaglio and, of course, their set back massing. Within the urban context where a zoning

---

[149] Raymond Hood, "A City Under a Single Roof." Nation's Business (November 1929): pp. 19-20, 206; Walter Kilham, Raymond Hood, Architect (New York, 1973), p. 91.

[150] Kilham writes, "A plan like that of LeCorbusier's for his "Ville Contemporaine," or "Centre de Paris," would have meant tearing down half of the city of Paris. Raymond Hood was more practical. It seemed unreasonable to attempt to tear down half the city of New York at once and begin again from scratch with some architect's idea of what New York City should look like." Kilham, Hood, pp. 90, 91.

[151] William Parker Chase, New York 1932: The Wonder City (New York, 1932), p. 194.

284

ordinance prevailed, the set-back configuration had an unquestionable logic. However, Walker also designed buildings throughout the State of New York with similar features despite the absence of such an ordinance. His building in Syracuse, New York, or Newark, New Jersey, suggest the formal kinship which Walker was beginning to strike between buildings both inside and outside of the city limits (figs. 4.109, 110). The building which he designed for the Telephone Company in Hempstead, New York, on Long Island some forty miles from the city and in a low scaled minor city also sported the set back configuration (fig. 4.111).

These examples suggest just how vital the set back form had become by the late twenties as a design convention. Against the backdrop of the planning discourse, these examples also suggest the clarity with which the rhetorical program of planning had been understood by architects who seemed eager to participate in the efforts to inspire a unifying "consciousness" within a regional terrain.

Architectural Iconography of the Skyscraper City

By the late 1920s, the imagery of the skyscraper city as depicted by Hood and Walker was largely uncontested as either a model of American urbanism or as a revelation of 'modern' American architecture. Prominent architectural publications, especially American Architect, Architectural Forum, and Pencil Points carried articles by skyscraper architects or advocates of the new urbanism such as Hood and Corbett. Major architectural texts featured images of skyscrapers configured according to the set-back ordinance and representative of the skyscraper city. George Edgell's American Architecture of Today of 1928 contained the Corbett/Ferriss renderings of setback configurations, images of highrises such as the Barclay Vesey Building, and Rankin and Kellog's Elverson Building in Philadelphia as well as aerial views of major American cities such as New York, Detroit and San Francisco in which setback towers were visible (fig. 4.112-15).[152] Edgell even concluded his book with drawings by Hugh Ferriss showing the city as a combination of "great masses" and "decked traffic communications" which reiterated the essential combination

---

[152] George Edgell, American Architecture of Today (New York, 1928), figs. 348-57.

within regional planning of zoning and circulation (fig. 4.116). Sheldon Cheney's The New World Architecture of 1930 also contained Ferriss renderings of tower-like skyscraper forms alongside images of buildings by Walker, Hood, and E.J. Kahn (fig. 4.117).[153] In 1928, an article by Corbett appeared in the New York Times pronouncing that urban architecture and in particular the set-back skyscraper represented the only area in which American art had advanced since the war.[154] It is also significant that the closing of the AIA Journal and the dismissal of Charles Whitaker in 1927 brought to a close an era of that magazine's advocacy of the Garden City movement as well as its critique of Adams' regional planning and the skyscraper advocates such as Corbett.

The accession of this urban model within the late 1920s is also recorded in the development of the site plans for the Chicago "Century of Progress International Exposition" which began in 1928 under the direction of Paul Cret and Raymond Hood. As we have noted in a previous chapter, the selection of these two architects by the fair's organizing committee was somewhat unusual in light of the dissimilar trajectories of their careers. Although well matched in their educational backgrounds and professional stature, Cret's work consisted primarily of large institutional buildings whereas Hood was best known for his commercial work in urban office towers. The architects whom they selected to join them on the Architectural Commission -- Ralph Walker, Harvey Wiley Corbett, Hubert Burnham, Edward Bennett, and Arthur Brown -- reinforced this division. Based on the character of their work, Walker and Corbett were more closely aligned with Hood whereas Brown, whose San Francisco City Hall epitomized White City Planning, was closer to Cret. Thus, in a sense the Commission personified the same conflict of iconography that pitted the City Beautiful against the "City of Towers" and which had manifested itself in the New York Regional Plan.

The fair organizers selected a site for the fair in the immediate vicinity of downtown Chicago on the southern side of the great lagoon which Burnham had located at the center of his 1909 plan for the city. From its first inception the symbolic intention of the Architectural Commission was, in the words of Louis Skidmore, the coordinating architect,

[153] Sheldon Cheney, The New World Architecture (New York, 1930), pp. 145, 153, 399.
[154] Harvey Wiley Corbett, "America's Great Gift to Architecture," NYT (18 March 1928): pp. 4-5.

...to design a World's Fair that would depict the century of progress in science and its effects on industry and life.[155]

So, Committee members assumed the agenda of conveying industrial and technological progress through the planning and architecture of the Fair. This is evident in the first 'parti' developed by the Commission in 1928 which called for an axis connecting the city entrance at 23rd street to a central court of honor surmounted by the Hall of Science and an airfield beyond in which the achievements of science and technology were physically manifest (fig. 4.118).[156]

In the elaborations of this diagram by the Commission members, distinctions in both their individual talents and their private passions become evident. The scheme of Arthur Brown, for example, recalls the spirit of his San Francisco City Hall (fig. 4.119). A large domed building standing centrally commands the complex of lower one story exhibition spaces. Distant axial views solidly reinforce the central pavilion and a harmonious and consistent stylistic model pertains throughout.. The central hall, reminiscent of the main pavilions of the Chicago Exposition of 1893 and his own designs for the San Francisco Exposition of 1915 done in collaboration with Bennett, housed the Hall of Science. Thus the image of technological progress was associated with the central pavilion and given symbolic if not stylistic tangibility.

In the scheme of Paul Cret there is a hierarchy and axiality similar to that of Brown's scheme (fig. 4.120). Cret's plan includes the small airfield on axis with the Hall of Science. Again the thematic program is reinforced through the medium of axial planning in which the Hall of Science and Court of Honor could be merged with the airfield beyond. Moreover, Cret's plan reveals a second level at which Science and Technology were represented: a transverse bar of pavilions resembles a wing and the central court the fuselage of an airplane. This image was inspired by the expectation that many visitors to the fair would in fact arrive by plane.

Within the fascination for the image of the fair from above can be seen elements of the conventions of White City planning, specifically the transformation in modern terms of the view of the city from the water -- a popular theme advanced by the City Beautiful advocate, Charles

[155] Louis Skidmore, "Planning and Planners," AF 59 (July 1933): p. 30.

[156] The parti was publicized in "World's Fair of 1933," PP 10 (February 1929): pp. 216-28.

Mulford Robinson, for example.[157] Just as the designers of the Columbian Exposition had monumentalized the water approach in that fair's main lagoon, the airport in Cret's scheme acknowledged and monumentalized the approach by air. Thus, Cret's "modern city" -- as implied through the plans for the fair -- continued to work with the traditional conceptions of urban planning, substituting the image of the airplane and the physical presence of an airfield for the urban profile of domes and towers which formerly inspired American city planning.

Both the Cret and Brown schemes showed an effort to represent the thematic program of the exposition architecturally. Although Cret's scheme was more literal in its iconography, both schemes resorted to a traditional planning method which they put to the service of a symbolic and institutional program, a planning method strongly suggested by the physical proximity of the fairgrounds to the remaining fragments of Burnham's Chicago Plan. The first proposals of Raymond Hood for the fair addressed the city in a manner fundamentally different from the implied urbanism of Cret's and Brown's schemes, one which evolved from a belief in the abstract and determinative influences of systematic rather than formal controls on urban growth (figs. 4.121, 122). The general view of Hood's scheme is the image usually shown in histories of his work and resembles both the Cret and Brown schemes in the suggestion of a formal centrality recognized by the large water court and tall obelisk.[158] However, it was at the smaller scale of the individual pavilions that Hood revealed the extent of his intention to allow circulation to dominate as a generative force in the planning of the fair. Utilizing a consistent section in which major arteries occurred at the uppermost level and in which the lower levels terraced out toward an open and untouched groundplane, Hood's scheme recalled both the linear city projects of the planner Arturo Soria y Mata as well as the domestic legacy of community planning alongside transportation cores picked up by Corbett in the 1920s.

The exclusion of this drawing of Hood's from most histories of his work is undoubtedly a consequence of its apparent anti-urbanism, evident when considered in the context of the linear

---

[157] See for example Charles Robinson, City Planning (New York, 1916); or Robinson, Modern Civic Art or the City Made Beautiful (New York, 1918).

[158] See for example Stern, Hood, p. 90.

city schemes. Most authors take great pains to emphasize Hood's interest in urban intensification and so this image by itself is inappropriate to the acknowledged interpretation of Hood's work.[159] But, the project for the "Century of Progress" cannot be fully appreciated without comparison to Hood's near contemporary urban schemes such as his "City of Towers." Taken in unison, the two Hood schemes suggest a juxtaposition of highrise complexes -- administrative headquarters which housed Hood's corporate clients -- and luxurious domestic scaled low rise of the proposals for the Fair.

This juxtaposition again bears similarities with Le Corbusier's urban images. Yet we recall that the "City of Towers," was to be realized slowly through the devices of zoning rather than immediately through the apocalyptic imposition of a new on old. Clearly, LeCorbusier's urban models such as the Ville Voisin or his proposals for New York City which appeared in the 1924 publication, Urbanisme, were intended more for didactic purposes than as actual proposals (fig. 4.123). But the oppositional tension which existed in Le Corbusier's depiction of new and old is absent in the Hood scheme which evolved gradually out of the normal conditions of urban growth.

Like Hood's project, the scheme of Ralph Walker demonstrates an affinity for the skyscraper city and the work of the RPA (fig. 4.124). Walker suggested a plan for the fairgrounds in which a tall building housing the Hall of Science stood at the head of a group of ancillary pavilions. Walker's scheme suggested parallels with proposals made in the Regional Plan for tall buildings such as the Gilbert and Swales Civic Center Project illustrated in the RPA publications. But Walker's project for the 1933 fair also resembles Arthur Holden's Queens' Plaza project, that prototypical tower which might occur frequently at the intersections of transit systems throughout the urban and suburban area. This idea is reinforced when we consider the way in which the context around Holden's tower was depicted: the adjacent buildings are only shown in ground plan. Therefore, the spatial development which we saw in the Swales proposal is not possible here. Based on this drawing we see the tower as a free standing obelisk with no relationship to context except for the simple fact of the convergence of transit routes. Similarly, we can view the

---

[159] For example, Willis, "Modern Skyscraper"; Stern, Hood; Kilham, Hood.

skyscraper as depicted by Walker in his proposal for the fair as an architectural punctuation for an extensive urban environment strung together by circulation arteries rather than as the monumental edifice spatially integrated into an urban environment as demonstrated by the Gilbert and Swales project for City Hall Park.

The importance of the relationship between Walker's proposal for the fair and the tower as depicted in the Queen's Plaza project illustrated in the Regional Plan becomes evident when we consider Corbett's proposal for the fair's site plan (figs. 4.125, 126). Corbett proposed a plan which represented the ideal of a decentralized skyscraper city strung together by a network of circulation routes as envisioned in the Regional Plan. In his site plan, Corbett suggested that the fair pavilions be housed in a two level structure which would cover the site in an extensive grid. He articulated the intersections of these pavilions with towers that recall the isolated office buildings encouraged by the Regional Plan and reiterated by Walker's proposal for the fair. Pedestrian circulation was to take place at the second level and visitors to the fair were to move down into the exhibits. The pavilions were to be connected at water level by a series of canals. These recall the image which Corbett had of the city as a "modern day Venice."

We see in Corbett's plan an effort to understand this planning problem in a systematic way, reducing it to a rationalized movement pattern -- diffuse and non-hierarchical -- and punctuated at intersections within the circulation system by towers. Were these to be, in fact, tall office buildings, one imagines that here might be the realization of the rationalized "city of towers" in which a separation of vehicular and pedestrian traffic insured efficient circulation, in which zoning insured even growth and in which economics provided a continuous impetus for development.

These early schemes for the fairgrounds were all quickly superseded in the wake of the depression which imposed tight economic restrictions on the architectural commission. As we noted in the previous chapter, in their place an asymmetrical scheme proposed by Hood was adopted.[160] Corbett, however, was able to develop some of his early ideas further in his pavilion

---

[160] Century of Progress Exhibition Company, Book of the Fair (Chicago, 1933), p. 19.

290

for the General Exhibits (figs. 4.127, 128). This scheme followed along the same lines of logic as did the site plan generally: the scheme was purposefully composed of serial elements which could be duplicated were the requirements for exhibition space to increase unexpectedly. Each bay of the pavilion consisted of an "L" shaped exhibition area straddled on one side by a second level walkway which permitted the visitors without interest in specific exhibits to pass quickly through. Slower moving and more attentive visitors could stay on the ground floor without impeding this traffic. Thus, the scheme functioned in a fashion similar to Corbett's proposals for New York by splitting up fast and slow moving traffic to avoid conflict and congestion.

At the end of each of these bays and also at the point of entrance to the lower or upper circulation systems, Corbett placed a tower whose cubic form resembled the cubic masses of the set-back tower adjusted to the constructional characteristic of the steel frame. As in the case of the Queen's Plaza Tower, the pavilion towers marked the important nodal points along his circulation system and combined both the reference to the highrise and urban circulation in the process. Thus, Corbett represented the urban scenario described by the RPA documents, proposing a system combining buildings and circulation which grew "mechanically," as Mumford had noted.

Corbett's work demonstrated how aggressively he pursued the task of 'envisioning' the regional planning motif. Based on its relationship to the work of the RPA, the skyscraper city he portrayed celebrated urban densification and prophesied the longevity of the city as a 'machine' simultaneously producing and consuming itself. This imagery suggested an urban environment different in its spatial quality from the White City, but rigorously centralized as that city had been in its social and symbolic function, the centrality of the new city's political operation represented by the constant presence and intractability of systems of order such as zoning and transportation networks. By eliminating distinctions of topography and allocating building types according to an urban order, these images duplicated the principles of regional planning in its quest to erase distinctions of locality and to erase political self-determination forging instead a "regional consciousness."

The depictions of future urban settings forged by architects in the 1920s foretold both the ability of planners to institute remedial controls on the economic forces fueling growth in the city and the continued viability of urban development which planning efforts promised to sustain. As 'envisioned' by Corbett, planning offered the potential to resolve the dilemmas of overcrowding, congestion, lack of air and light as well as the threat of stagnated growth. At its core, the urban imagery that he and other architects conjured offered an idealized view of the management strategies celebrated by ideologues of the 'New Era.' Thus, they carried out a modernist ideology, committed both to the preservation of existing modes of production and exchange and to the methodologies of rational management. At the same time, however, architects seeking to refine the function of the urban 'machinery' by procuring for planners a more favorable public audience also propagandized urban expansion, encouraged a broader terrain for real estate speculation and thus defended their own area of expertise as functionaries to American city building.

Chapter Five: Toward a Modern Style: Architectural Design and the Ideology of Consumption,

1919-1933

> What are the great, universal motive forces of society?...A passionate desire to
> own an a omobile, a Victrola and a radio set. A deep yearning for the movies,
> jazz music and really good bootleg gin....Where once were argonauts and
> Crusaders and Conquistadors and merchant adventurers are now big business,
> high finance, efficiency experts and advertising.[1]

> Ralph Adams Cram (1924)

Throughout the 1920s, architects attempted to forge a new design methodology, one based

on a single, all encompassing aesthetic program. Compelled by the proliferation of iron and steel

construction which challenged the use of traditional styles based on masonry construction methods

and attracted by the historiographic model of a culture voicing itself through a unique language of

form, American architects expressed a desire for a singular architectural "style of the age." The

goal, as Bertram Goodhue explained, was to formulate a style that could be applied to any building

type in any environment and that was capable of substituting itself for the various stylistic

precedents called upon in the service of historical eclecticism.[2]

This aspiration to reject the authority of historical precedent and seek a contemporary

voice for American architecture merged with a new 'cultural' agenda prioritized by industrial

managers after World War I. The war had accelerated the expansion of industrial output in the

United States, a result achieved primarily by more efficient management of labor, material and

machinery. Having achieved levels of productivity which outstripped existing demand, industrial

leaders searched for the means to control and expand the markets for industrially produced goods.

They concentrated their efforts on the transformation of diverse social and ethnic groups into a

single, national consuming audience. Thus, having achieved control over Americans at work,

managers reached out to control their private lives, striving to forge a consciousness among the

---

[1] R.A. Cram, "The Value of Precedent in the Practice of Architecture," AIAJ 12 (June 1924): pp. 263-5.

[2] "American Architecture in England," AIAJ 10 (January 1922): pp. 16-18.

'mass' of Americans that overstepped class and ethnic boundaries and encouraged their consumption of industrial commodities.

The rhetoric which industrial managers applied to this task was compelling: they projected images of an industrial utopia which overcame both the marginality of traditional lifestyles and the oppressive living and working conditions spawned by an industrial economy. Industrial products, they maintained, lightened the burdens of work at home and in the workplace and offered new diversions such as the automobile and the radio which were accessible to consumers through the marketplace. Moreover, they argued that such consumption would initiate a cycle of economic growth, creating a demand for commodities which, in turn, would spur production, produce more opportunities for work, generate and distribute more wages, thus increasing American buying power.

This 'ideology of consumption' contained within it a powerful impetus for a modern imagery constituted not merely by a 'style of the age,' but also consisting of an aggressive rejection of traditional culture and the imagery by which it was known. The 'ethos of mass production' which emerged in the 1920s expressed both a fascination for the utopia projected by industrial managers and a powerful anti-traditionalist sentiment which sustained a popular modernist ideology.

American architects accepted the symbolic program of industrial utopia as their own and created a visual rhetoric which argued the social necessity of consumption as effectively as the images of plenitude projected by industrial utopians. Architects cultivated an aesthetic novelty in their work which proclaimed the imminence of change in the social order and the freedom of choice available to consumers in a commodity culture. Ultimately, they incorporated into their design discourse the claim made by industrial utopians that modern commodities facilitated modern lifestyles. Thus, architects maintained that modern architecture was a product of the same industrial forces which had given rise to other life enhancing commodities and insisted on its utility to lifestyles defined by the regimen of consumption.

Efforts toward a New Style Before 1924

In 1924, members of the AIA attending the annual convention in Washington D.C.

witnessed a lively session chaired by Henry van Buren Magonigle entitled, "Plagiarism as a Fine

Art" in which speakers openly challenged the dominant conventions of academic eclecticism.[3] At

the root of their discontent was the feeling that the design conventions that were dependent on

historical styles were inconsistent with the professional aspiration for a unique, contemporary style

by which their historical era would be known.[4] Even Magonigle, a traditionalist in his aesthetic

presentiments, felt compelled to question the cultural implication of an artistic discipline such as

architecture which seemed to encourage "plagiarism."[5] What messages, he asked, would be

transmitted to later generations about the genius of the "age" were its artists merely to "copy" the

best achievements of the past?

A number of factors seem to have contributed to this desire to reexamine the methods of

academic eclecticism in 1924. Architects of diverse convictions such as Ralph Cram and George

Howe described a powerful sense of discontinuity with the past which prevailed after 1919. As we

have noted previously, the disquietude experienced by these individuals confronting the political

and social upheaval produced by the World War was reinforced by a disorienting professional

milieu caused by the inactivity of architects during the military buildup and the tumultuous

economic conditions which followed during the period of reconstruction. Moreover, during the

mobilization for war, managerial acumen displaced "art" as the source of American cultural pre-

eminence and thus placed into jeopardy the professional emphasis on taste and the canons of

traditional architecture.[6]

As much as the experiences during the half decade prior to 1924 may have produced

personal and professional anxiety among architects, the year still marked an important point of

---

[3] See AIAJ 12 (June 1924): p. 259ff.

[4] For a review of the historical imperatives of a novel 'style of the age' see chapter one, section on "Style and Historical Conscience."

[5] H. van Buren Magonigle, "Plagiarism as a Fine Art," AIAJ 12 (June 1924): pp. 259-60.

[6] On Cram's reaction to the war see his criticism of the Lincoln Memorial cited in chapter one. On Howe's reaction to WW I see Robert Stern, George Howe (New Haven, CT, 1975), pp. 60-65. See also William Mitchell, "The Question of Precedent," AIAJ 52 (June 1930): p. 780. On the changes in the notions of professional 'service' see chapter one.

transition. The previous two years were characterized by the gradual expansion of construction

activity which followed the lean years during the war and in its aftermath. As a consequence, 1924

was perhaps the first year in which architects could re-assess their professional conduct without the

pressure of political or economic crisis. But while the conditions of work may have seemed secure

for the moment, the intellectual leadership of their profession was in flux. In 1924, AIA members

gathered to mourn the passing of three of the most prominent American architects, Louis Sullivan,

Bertram Grosvenor Goodhue, and Henry Bacon.[7]

These deaths alone might have catalyzed the critical debates which took place at the

convention and in the pages of the AIA Journal in 1924. But their impact was reinforced by a

quick succession of professionally significant events that sensitized American architects to the

'progressive' challenges emerging within the professional discourse. Two years earlier, the Chicago

Tribune Competition had rekindled the debate over the appropriateness of 'precedented' styles to a

'building type whose constructional system and physical proportions were unlike any building

problems of the past. The re-entry of Louis Sullivan as a powerful critical voice in the wake of that

competition, commending highly the second place entry by Eliel Saarinen, restored to prominence

the argument for an unprecedented, national style based on structural principles and appropriate

to the character of American building types such as the highrise office building (fig. 5.1).[8] Earlier

still, Bertram Goodhue's winning submission in the competition for the State Capital in Lincoln,

Nebraska, held in 1920, further challenged the conventions of historical eclecticism (fig. 5.2). In

rejecting the model of the U.S. White House, a longitudinal block with opposing chambers

surmounted by a dome, for a unique plinth and tower scheme which took its inspiration from the

form of the commercial highrise, Goodhue seemed to endorse Sullivan's resistance to the canons

of traditional styles. In his book, Sticks and Stones, published in 1924, Lewis Mumford also

criticized historical eclecticism by arguing against the expense of traditional ornamentation and

---

[7] See the following testimonial articles in AIAJ 12 (June 1924): "Louis Henry Sullivan," pp. 275-76; "Bertram Grosvenor Goodhue," p. 276; "Henry Bacon," pp. 276-77.
   [8] Louis Sullivan, "The Chicago Tribune Competition," AR 53 (February 1923): pp. 151-57.

urging relief for the architect from the interference of precedence in his response to new building "functions."[9]

Conspicuous within the arguments in favor of a 'new style' was the claim that the tall office building and steel frame construction constituted a new and expanding terrain of architectural investigation. As the educator and architect, William Boring, noted in his presentation at the 1924 AIA convention, it was the pre-eminence of highrise building among those problem-types which architects encountered in their work that undermined the authority of academic eclecticism: the inadequacy of historical precedent to the task of aesthetically resolving the formal dilemmas posed by the skyscraper had made it impossible, Boring claimed, to base either an effective teaching pedagogy or a professional design canon on design methodologies that borrowed from the past.[10]

Boring's willingness to accept such a profane building program as the subject of an artistic language owed a great deal to the success -- both among architects and the lay public -- of a series of tall office buildings built before the war and epitomized by the Woolworth Building by Cass Gilbert (fig. 5.3). In 1917, Edwin Cochran's accolade of the building as a "Cathedral of Commerce" had diminished the stigma of its commercial nature and held out the promise that its architectural merits might make it the equal of buildings for governmental or cultural institutions.[11] Similarly, the promotional literature for the Chicago Tribune competition after the war emphasized the "beauty" of the skyscraper that the company intended to build. This portrayal of the building as a 'cultural' event minimized the disparity between the commercial interests of the publishing empire and the public image of the building as an edifying monument.[12]

Due to their innovative constructional method and unique program, skyscrapers such as the Woolworth Building and the Tribune Building were also regarded as being uniquely American, adding weight to the argument that these should constitute the basis of a contemporary American

---

[9] See for example his chapter, "The Age of the Machine" in Lewis Mumford, Sticks and Stones: A Study of American Architecture and Civilization (New York, 1924), pp. 71-90. Mumford made this point earlier in his article, "Machinery and the Modern Style," New Republic (August 3, 1921): pp. 263-65.

[10] William Boring, "What is Precedent Doing to American Architecture," AIAJ 12 (June 1924): pp. 260-63.

[11] Edwin Cochran, The Cathedral of Commerce (New York, 1917). See also Gail Fenske, "The Woolworth Building" (Ph.D. diss., Massachusetts Institute of Technology, 1989).

[12] The International Competition for a New Administration Building for the Chicago Tribune (Chicago, 1922, reprinted 1980).

style.[13] As a confirmation of this view, the traveling exhibition of notable American buildings sponsored by the AIA and introduced by Bertram Goodhue and Donn Barber in England and France in the fall of 1921 included spectacular images of American highrise buildings such as a large model of the Woolworth tower (fig. 5.4a, b, c).[14] Reinforcing this perception, the competition for the Tribune Tower drew entries from architects around the world, transforming Chicago into an international center of architectural activity and the highrise -- a building problem encountered only in North America -- into an international genre.

In contrast to the clarity with which skyscraper boosters argued for its investiture as the premier American building type, their efforts to formulate an appropriate design methodology were plagued by conflicting aesthetic interpretations. It was apparent that highrise construction produced buildings with proportions that were difficult to accommodate with traditional styles, especially the refined classicism advocated for monumental urban structures by the White City Movement. Moreover, the very nature of the building's 'monumentality' was called into question by the civic insignificance of its program. The issue of monumentality became more perplexing when viewed from the vantage point of conventional expectations: citing the example of Klauder and Day's "Cathedral of Learning" (Pittsburgh, 1931), a highrise which invoked the vocabulary of buttressed forms and pointed arches taken from the Gothic, the architect and historian, George Edgell, claimed that steel frame buildings -- even those such as the Cathedral of Learning -- possessed a visual character of lightness which suggested impermanence, a quality at odds with the traditional aesthetic conventions of monumental architecture (fig. 5.5). He further noted that in typical examples of highrise construction, the relationship between the rigid metal frame and its skin, the curtain wall, magnified the dilemma of formal interpretation by concealing the structure, on the one hand, and conflicting with the massive and permanent appearance of styles derived from masonry bearing wall construction, on the other.[15]

---

[13] On the highrise as an American building problem see for example Arthur Penty, "Architecture in the United States," AIAJ 12 (November 1924): pp. 475-78.

[14] "American Architecture in England," AIAJ 10 (January 1922): pp. 16-19.

[15] George Edgell, The American Architecture of Today, (New York, 1928), p. 183.

The problem of interpreting visually the constructional model that combined a rigid metal

frame with a thin exterior cladding compelled architects to reconsider the work of Louis Sullivan.[16]

Writers such as Claude Bragdon and Lewis Mumford helped to reaffirm his reputation as an

ornamentalist whose treatment of the building skin was, in the words of Bragdon, "revelatory."[17]

Within their descriptions of his work, both Mumford and Bragdon noted that the constructional

system that Sullivan exploited consisted of a rigid cellular frame covered with a "skin" onto which

he inscribed an ornamental pattern whose character revealed the light weight of the cladding and

its fabric-like quality.[18] This interpretive model was evident in the vocabulary invoked to describe

such buildings, their surfaces decorated in "tapestry" patterns.[19] Articles by Bragdon describing

methods by which it was possible to create 'unprecedented' ornamental motifs through

mathematically generated geometric patterns appeared with greater frequency in the professional

literature and suggested further the currency of a design strategy emphasizing both aesthetic

novelty and surface treatment (fig. 5.6).[20]

In the 1920s, Sullivan brought a similar critical terminology to the architectural discourse

through his written work. For example, in an article appearing in Architectural Record in 1922

praising the project by Eliel Saarinen for the Chicago Tribune Competition, he invoked the same

criteria that Mumford and Bragdon had applied to his own work. Saarinen had proposed a tower,

Sullivan maintained, whose "cubic" forms demonstrated the cellular character of the frame. The

exterior skin, though dominantly vertical in its emphasis, consisted of interwoven piers and

---

[16] Not coincidentally, Sullivan's autobiographical sketches appeared in the AIA Journal in 1922 and were later republished by the AIA Press as The Autobiography of an Idea (New York, 1924) shortly after his death.

[17] Claude Bragdon, The Frozen Fountain (New York, 1932), p. 8; on Sullivan's ornamentalism see Mumford, Sticks and Stones, p. 79; Edgell, American Architecture, p. 77.

[18] See for example Dankmar Adler describing the fireproofing enclosure of the highrise as the "media for artistic expression" in "The Influence of Steel Construction and Plate Glass Upon Style," Address given at the Thirteenth Annual AIA Convention, reprinted in Lewis Mumford, Roots of Contemporary American Architecture (New York, 1952; reprint, 1972), pp.243-250. On the skin as "drapery" or interpreted as fabric see for example, Magonigle, "Plagiarism as a Fine Art," pp. 259-60; Eugene Clute, Drafting Room Practice (New York, 1928), p. 77.

[19] See for example, William Starrett on "Tapestry Brick" in Starrett, Skyscrapers and the Men Who Build Them (New York, 1928), p. 220. Bragdon did a promotional pamphlet for the Fiske Face Brick Company published in New York in 1909 in which he described the historical precedents for what the company called Tapestry Brickwork. Fiske copyrighted the name "Tapestry Brickwork" which it continued to use in its advertising after WW I.

[20] Claude Bragdon, Architecture and Democracy (New York, 1918); see also Bragdon, The Beautiful Necessity (New York, 1910; reprint 1939).

spandrels whose pattern articulated the building volume as well as the structural pieces out of which it had been formed. This treatment demonstrated to Sullivan the "thesis of the steel frame" revealed in Saarinen's design.[21]

Beside Sullivan, Bertram Goodhue also held a commanding position within the profession, his work influencing the discussion in the early twenties on the suitable stylistic treatment of the highrise. As Mumford has noted, Goodhue's early projects were praised for their incorporation of motifs borrowed from exotic styles as in, for example, his pavilions for the Panama-Pacific Exposition in San Diego that was completed before the war. But by 1924, Goodhue's reputation had grown with his efforts to establish a formal and symbolic model for the skyscraper. Whereas Sullivan had attempted to derive a logical and novel solution to the tall building based on its program and construction, Goodhue was intent on drawing the highrise into the corpus of building types which had been built in masonry in the past and which had an institutional and civic significance equivalent to their scale in the city. Thus, Goodhue's emphasis on pre-modern styles was not merely an evocation of a load-bearing masonry system but also a call back to the imagery of spires and domes whose association with a religious institution gave their monumentality a social or cultural relevance.[22] This operation was demonstrated in a series of sketches of urban skylines in which New York skyscrapers were visually compared to buildings whose physical presence coincided with important cultural institutions (fig. 5.7). Similarly, in his designs for the Nebraska State Capital he substituted a skyscraper-like form for the conventional dome-and-lantern combination and authenticated its monumental presence programmatically by placing in it a governmental institution.[23]

Goodhue made other, similar experiments. In his Convocation Tower, a project which Edgell included as the frontispiece to his book, American Architecture of Today (New York, 1928), Goodhue proposed that a religious and therefore cultural institution be added to the

---

[21] Louis Sullivan, "The Chicago Tribune Competition," AR 53 (February 1923): pp. 151-57.

[22] Walter Creese, "American Architecture, 1918 to 1933, with Special Emphasis on the European Influence" (Ph.D. diss., Harvard University, 1950), pp. 12-13.

[23] Goodhue located the library component of the program in the tower. On the competition see "Nebraska Capital Competition," AIAJ 7 (August 1920): pp. 299-306.

otherwise undifferentiated program of a commercial tower (fig. 5.8).[24] As the architect, Albert

Kelsey, noted in 1924, the significance of Goodhue's projects lay in the degree to which they

demonstrated that the highrise form could be elevated in the character of its program to a level of

cultural significance commensurate with its monumental presence.[25]

But, the praise verbalized by Kelsey, Mumford, Bragdon, and others notwithstanding,

many professionals perceived both Sullivan's and Goodhue's efforts to forge an 'American' style as

conservative and out of step with the real conditions of architectural practice in the 1920s. Despite

its stripped orm, Goodhue's work was still riveted in the realm of institutional buildings quite

different, as even Mumford noted, from the commercial field in which most architects worked and

in which the skyscraper form had evolved.[26] Sullivan, whose Autobiography of an Idea

(Washington, 1924) appeared in a favorable intellectual climate in the 1920s, had nevertheless

executed his greatest buildings in a different milieu long before the war. His work was therefore

separated from the present by a wide historical gulf, a condition which promoted Fiske Kimball to

classify it as a pioneering effort which could offer little more than spiritual inspiration to

contemporary architects.[27] Kimball further noted that Sullivan's effort to "express the frame" was a

dead issue because the phenomenon of the setback skyscraper as produced by the zoning

ordinance prioritized the volumetric character of the building over the expression of its inner

structural logic.[28] Indeed, the setback skyscraper set itself at odds with both the work of Goodhue

and Sullivan, for whereas its commercial orientation was quite different from the elevated program

of a state capital or a religious institution, the imposition of form as implied by the concept of a

zoning 'envelope' conflicted with Sullivan's desire to display the 'thesis' of the steel frame.

---

[24] Other similar examples exist which bear comparison to Goodhue's scheme, in particular, that of Klauder and Day for their Tower of Learning. Unlike a commercial tower, the Tower of Learning was dedicated entirely to the purpose of education. On the relationship of these two projects see Creese, pp. 12-13.

[25] Albert Kelsey, "The Question of Precedent," AIAJ 12 (December 1924): pp. 536-37.

[26] Mumford, Sticks and Stones, p. 71; the latent conservatism of this work is suggested by Goodhue's own remarks on his role as an architect. In speaking to a gathering of British architects, Goodhue remarked that, "It is a melancholy fact and one that I wish could forever be kept in the background of the future, that the British element is now forming perhaps half of our population, is constantly dwindling and that the other and - am I right?-less desirable breeds are increasing by leaps and bounds. "American Architecture in England," p. 16.

[27] Fiske Kimball, "Louis Sullivan - an Old master," AR 57 (April 1924): pp. 289-305.

[28] This point is also made om Edgell, American Architecture, p. 75.

As we have previously observed, the concept of zoning first manifested itself in the architectural discourse during the 1920s as a celebration of its abstract controls on building form. In the case of the set back skyscraper, an iconography emerged which described their form as a 'volume' whose perimeters marked the borders between the surging force of urban expansion fueled by the growth of the industrial management structure and a countermanding resistance introduced by zoning and the practical limitations set by construction methods and marketing. Consistent with this view, many architects suggested that the formal interest of these buildings resided in the volumetric interplay of their set-backs rather than in their expression of programmatic character or in their revelation of structure. Alfred Bossom, who would later associate the form of the set-back tower with that of meso-American pyramids, suggested that these buildings were compositions in volume capable of standing without ornament.[29] Magonigle argued that the formula of a rigid frame wrapped with a 'skin' created a building medium in which there was little intrinsic relation between the exterior treatment and the underlying structure.[30] Corbett's zoning envelope studies done with Ferries in 1923 further reinforced the notion that the essential quality of these buildings lay in their pure cubic forms rather than in the cellular nature of their structural frame or the character of their program.[31]

In support of this view, writers frequently turned to the Shelton Hotel (New York, 1923) by Arthur Loomis Harmon, a building whose cubic forms embodied the idea of the highrise as described by Bossom and Corbett (fig. 5.9).[32] Whereas both Sullivan and Goodhue had attempted to restore to these towers a visual logic -- in the case of Goodhue, one derived from the formal vocabulary of traditional masonry architecture and, in the case of Sullivan, one more intimately connected with the structure of the rigid frame -- the interpretation of the skyscraper as a volumetric composition suggested that architects perceived its external form as the primary condition of its aesthetic content. In the Shelton and other buildings like it, architects praised the

---

[29] Alfred Bossom, "50 Year's Progress Toward an American Style in Architecture," AA 129 (January 5, 1926): pp. 43-9.

[30] Magonigle, "Plagiarism as a Fine Art," p. 260.

[31] Harvey Wiley Corbett, "Zoning and the Envelope of the Building," PP 4 (January 1923): pp. 15-17.

[32] See Mumford, Sticks and Stones, p. 92; William Boring, "What is Precedent Doing to American Architecture," AIAJ 12 (January 1924): pp. 260-3.

automatic action of the zoning ordinance which defined the building profile according to the street width and plot size. Whereas Sullivan and Goodhue endeavored to restore tangibility to the form of the highrise building -- by "revealing" tectonic qualities in the case of Sullivan or reconvening masonry forms and publicly significant programs in the case of Goodhue -- the Shelton's audience perceived a form that was abstract and universal, bearing no fixed relationship to program, place or constructional method.

The zealousness with which architects embraced the set back skyscraper as the basis for defining an American architecture did not go without criticism. Both Herbert Croly and Lewis Mumford suggested that the building type had been corrupted by its commercial purpose and that the imposition of a zoning ordinance was too restrictive and arbitrary to contribute to the formation of a movement of genuine artistic value.[33] "Great art is conscious and it is free," Croly wrote, "And the art of the American skyscrapers is only semi-conscious and is not at all free."[34] Conveying his own sense of the shallowness and opacity of this interpretive model, Mumford described the setback tower as a "draped cube."[35]

But for many architects it was precisely the automatic and mechanical aspects of the setback form -- implied by both its commercial practicality and the arbitrary logic of the zoning ordinance -- which were its best. "The zoning laws have reintroduced the element of interest into the design of high buildings in their design," Harvey Corbett wrote in 1926 in defense of its formulaic quality.[36] In the setback skyscraper, William Boring suggested, one saw "in a rugged way, the spirit of design" which American architects found most "inspiring."[37]

---

[33] Mumford, Sticks and Stones, p. 80.

[34] Herbert Croly, "A New Dimension in Architectural Effects," AR 57 (January 1925): pp. 93-4; Lewis Mumford, "Our Modern Style," AIAJ 12 (January 1924): pp. 26-8.

[35] Mumford, Sticks and Stones, p. 78.

[36] Harvey Wiley Corbett, "How Zoning Laws Affect the Contours and Rentability," Building Investment and Maintenance 1 (April 1926): pp. 17-19.

[37] William Boring, "What is Precedent Doing to American Architecture," AIAJ 12 (January 1924): pp. 260-3.

Architecture and Advertising

The design canon which Boring and Corbett advocated owed some of its success to the emergence and proliferation of a new agenda for industrial management following World War I: recognizing that the growth of industry depended on the formation of new markets for industrial products, managers engaged in a drive to attract Americans as consumers. Focused on the public at large, these efforts demanded a popular and universal language with which to address a mass-audience. In architecture, this linguistic program suggested a new direction, away from those formal vocabularies which, on the one hand, created and sustained barriers between high and popular culture as had the conventionalized languages of academic eclecticism; and, those which relied on arcane principles of form as exemplified in the work of Sullivan and Goodhue, on the other. The language through which an ideology of consumption was transmitted was also influenced by the fact that to most of its audience, the mass-produced commodities which industry placed in the market place were novel, their materials, forms, and functions unprecedented within households and lifestyles not yet dominated by industry. Thus, the program for a symbolic language with which to sustain this new commodity culture also demanded a modern voice which opposed the self-sustaining values of traditional and ethnic culture.

As numerous historians have shown, the emergence of this managerial program coincided with the dramatic evolution of advertising as both a strategy of selling and as a professional discipline with its own methodologies.[38] Paul Mazur, a contemporary chronicler of the twenties, observed that by 1914, industrialists considered advertising a valuable means of inspiring consumption and a vital component of industrial planning.[39] But, it was not until after World War I that the fetishizing strategies of advertising became a dominant motif of American industrial culture. The post-war economic crisis of 1919 caused by the suspension of government war orders

[38] On the evolution of advertising and its relation to 'modern design' in the 1920s see David Hounshell, From the American System to Mass Production, 1800-1932 (Baltimore, 1984); Stuart Ewen, Captains of Consciousness: Advertising and the Social Roots of the Consumer Culture (New York, 1976); Jeffrey Meikle, Twentieth Century Limited: Industrial Design in America, 1925-1939 (Philadelphia, 1979) Arthur Pulos, American Design Ethic: A History of Industrial Design (Cambridge, MA, 1983); see also David Potter, People of Plenty: Economic Abundance and the American Character (Chicago, 1954).

[39] Paul Mazur, American Prosperity: Its Causes and Consequences (New York, 1928),pp. 24-5; Walter Dill Scott's description of the role of advertising was published in his Influencing Men in Business (New York, 1911).

and the subsequent factory slowdowns, layoffs, and labor unrest indicated the continued

inadequacy of traditional modes of industrial management. At the same time, war-time output,

which set all records for transportation efficiency and plant and labor productivity, indicated to

Mazur and others that the dilemma which management confronted did not lie in the area of

production or distribution, "but in obtaining sufficient sales to keep the productive machine

running at top or nearly top speed."[40] Thus, advertising came to be regarded as important an

industrial tool in 1919 as the innovations in production management such as Taylorism and

Scientific Management had been before the war.

Not all observers agreed that the inducements to consume offered by advertising were all

that was necessary to get the American industrial economy running efficiently. Several writers,

such as Herbert Croly, observed the problem of excess productivity and advocated a return to the

Wilsonian methods of governmental wage and price fixing which had predominated during the war.

Writing in 1924 to his audience of architects, Croly observed that the "business contraction" which

had plagued the industry since World War I was due to "a temporary excess of manufacturing and

industrial energy and equipment which enables the cities to produce more consumable goods than

the country as a whole can by at current prices."[41] Croly warned that without governmental

intervention, laissez faire practices would continue to produce the imbalances between wages and

consumer prices that threatened a smooth running economy.

But, the proposals for centralized controls on the wage and price structure made by Croly

were out of step with the dominant thinking among industrial managers in the post-war era. As

George Soule notes, in the 1920s business and political leaders unabashedly pursued the goal of

maximizing industrial profits.[42] Toward the end of the decade, Paul Mazur explained that their

inflexibility on the issue of profit led to a mechanical view of the industrial order which

simplistically equated industrial output with revenue. "For years," Mazur wrote, "increased

production was viewed by industrialists as the means by which to overcome overhead costs -- when

---

[40] Paul Mazur, American Prosperity, p. 84.

[41] H. Croly, "Controlling Economic Factors in Current Building," AR 56 (August 1924): pp. 115-6.

[42] George Soule, Prosperity Decade (New York, 1947) p. 331-5.

profits slackened, production increased.[43] Industrialists also vigorously opposed higher wages which they regarded as a cost set against profit. Although numerous critics ranging from Croly to Henry Ford and Herbert Hoover argued in favor of wage increases as a means of enlarging the markets for industrial commodities, most industrialists pinned their hopes on the ability of advertising to create demand within consumer markets.

The post-war period offered an opportune moment in which to exploit advertising. Confronted with excess productive capacity, large inventories of finished but unsold commodities and capital accumulated and reserved during the war-time bonanza, industrialists had few options for investments. Mazur suggests that the presence of uncommitted capital combined with tax laws which encouraged re-investment of corporate profits made advertising a promising option doubly privileged by circumstances in the early 1920s.[44] To overcome the lack of consumer capital which resulted from a still low wage scale, industrialists applied other of their financial resources to the development of investment credit and installment purchasing programs. Thus, it became possible for Americans to buy commodities with credit using their future wages as collateral. It was left to the 'advertising man' to induce sufficient consumer interest in industrially produced commodities to compel them to assume that debt.[45]

In response to this challenge, specialists in advertising proposed to create 'psychological' incentives for consumption which rendered Americans more obedient as consumers. As Stuart Ewen has shown, in the 1920s the strategies of advertising pundits rested on two fundamental convictions: that the attitudes of a diverse and fractious audience could be controlled; and, that word and graphic images associated with specific products could enhance the desire for ownership

---

[43] Mazur, American Prosperity, p. 16.

[44] Ibid.

[45] As George Soule noted, having achieved high levels of productivity and efficiency during the war and confronting limited consumption during the first years of reconstruction, American industrialists had little incentive to invest in industry. One consequence of this, he observed, was the rampant speculation in real estate, an area that offered the promise of significant returns on investment. Advertising, however, represented one of the few areas of industrial investment that offered promise of a significant payback insofar as it was reputed to increase the desire for commodities it advocated. Moreover, taxes on corporate profits in the 1920s encouraged managers to assume the expense of advertising as a legitimate tax dodge. Both Mazur and Soule also claim that the desire to increase consumption and the availability of corporate capital set the stage for the proliferation of promotion schemes that offered to consumers the option of 'installment buying.' See Soule; and Mazur, American Prosperity. See also Potter; and E.B. Alderfer and H.E. Michl, Economics of American Industry (New York, 1950), p. 655.

of them. The success of the 'advertising man' in achieving these ends is suggested in the writing of

E.A. Park, a self appointed chronicler of fashion and design in the 1920s, who observed that, "A

fetish for symbols and slogans seems to be temporarily taking the place of normal supply and

demand."[46]

The specific advertising strategies used in the twenties evolved gradually as a reaction to

the problems that 'advertising men' identified in the markets of their clients. Paul Mazur observed

two recurring and predominant types of problems to which advertising was directed as a solution.

First, he noted that it was a common experience for large manufacturers who distributed nationally

to encounter resistance to their products within local and regional markets. In response,

marketing strategists developed the tactic of the 'national' or 'brand' name which was intended to

overstep regional as well as class, ethnic and gender boundaries.[47] While Mazur acknowledged

that the quality of these products was generally high, he was quick to point out that the

phenomenon of product loyalty was more often a product of advertising rather than the result of

consistent consumer satisfaction.

> Since...it is probable that the use of advertising ...was the result of the urge for
> greater sales, it seems...likely that the pride of ownership of brand names was a
> result rather than a cause of the development of intensive markets.[48]

Mazur also observed that among the most essential of the tasks assumed by advertising

was that of establishing a value and creating a desire for industrially produced commodities among

an audience that had no established need of them. "Subsequent to the birth of every new product,"

Mazur wrote, "came the necessity of inspiring consumer interest for it."[49] The difficulty of creating

'consumer interest' varied with the social terrain: for those groups whose experiences had

accustomed them to technological change and which primed them for ad 'copy' extolling the virtues

of new devices, the effectiveness of advertising in describing the purported function of commodities

might be high. But, as the medium through which new products such as the radios or the

refrigerator, were endorsed, advertising frequently pitted itself against established living patterns in

---

[46] Mazur, p. 45; Ewen; Edwin Avery Park, New Backgrounds for a New Age (New York, 1927) p. 60.

[47] Mazur, p. 94; Ewen, p. 25.

[48] Mazur, p. 21.

[49] Ibid., p. 20.

which new products had no precursors and for which there was no apparent need. In these cases, advertising strategists perceived their role as public educators defining new patterns of social behavior for which the commodities they marketed were essential. Indeed, for working class Americans, many of whom were foreign-born and retained lifestyles carried over from pre-industrial and pre-consumer societies, the novelty of industrial products did not reside merely in their function but extended to their very nature as commodities: advertising trained people with needs that had formerly been satisfied by local craft production acquired by barter to buy things with money acquired (or about to be acquired) as wages. As Stuart Ewen has shown, in these cases advertising strategists programmed their rhetoric -- both visual and verbal -- to "nullify the customs of ages", setting a robust 'modern' commodity culture against what were portrayed as fragile and backward traditional lifestyles.[50]

Architecture -- and the tall office building in particular -- offered a vital medium for the new symbolic program of industry. The urban towers housing corporate management held sway over a diverse urban audience making it a formidable component of the mass media. In a sense, these buildings had always functioned as a medium of corporate ideology. As Olivier Zunz has pointed out, the tall office building emerged as a corporate symbol in the late nineteenth century. Its evolution had depended on two factors: first, the separation of administrative from factory operations in large industrial organizations and their relocation in urban centers; and second, the proliferation of tall office buildings in urban centers which produced a vivid imagery of corporate leadership and economic power.[51] In his text on city planning published in 1916, Nelson Lewis noted that the tall office building contained an advertising value which their owners were compelled to consider alongside their financial returns.[52] The Woolworth Building, one of the preeminent corporate towers before the war, demonstrated this symbolic content, its importance

---

[50] Ewen, p. 19.

[51] Olivier Zunz, Making America Corporate (Chicago, 1990), p. 104-5.

[52] Nelson Lewis, The Planning of the Modern City (New York, 1916), pp. 126-7; see also Christine Boyer, Dreaming the Rational City (Cambridge,MA, 1983), p. 88.

308

as an advertising medium offsetting the economic loss caused by its small floor plan and low projected income.[53]

The messages conveyed by these first corporate towers is important to observe. We have already mentioned that the Woolworth Tower, clad in a Gothic style and equated with religious institutions by its admirers, imbued the corporation it housed with a cultural value. Similarly, the directors of the Metropolitan Life Insurance Company together with their architect, N. Lebrun and Sons, selected the campanile of the Italian republics as an appropriate "symbol of civic responsibility and public service, representative of the aspirations of an insurance company" when they built in 1907 (fig. 5.10). Zunz has also suggested that the disciplined use of this historical precedent "emphasized Metropolitan Life's commitment to responsible business practices at time when so many other New York insurance companies...had come under indictment of the Armstrong Commission" for fraudulent business practices. Thus, the highrise in combination with the use of an appropriate stylistic precedent was intended to convey the image of a seasoned and well mannered business institution.[54]

Such office towers satisfied numerous corporate goals, producing a tangible and conspicuous imagery, riveting attention on the individual owner as well as inspiring respect for the shear capacity to build. Writing in 1934, Alfred Bossom, the English architect responsible for many corporate bank headquarters throughout the United States, called the corporation towers of the 19th and early 20th centuries, "Placards of prosperity." "To find self-expression and self-advertisement in some conspicuous edifice," he claimed, "is an ambition man is keen to realize....They stand for victory in the battle of life." Moreover, the presence of these towers, symbols of "victory," edified their urban audience.

> Nothing so ministers the pride or so fires the imagination of its citizens as that.
> For 365 days in every year they stand out as the inescapable proof of well being
> and achievement....The habit of looking upwards is a strengthening habit.[55]

[53] W. Starrett, Skyscrapers, p. 85; Louis Horowitz and Boyden Sparkes, The Towers of New York (New York, 1937), p. 2.

[54] Zunz, p. 114.

[55] Alfred Bossom, Building to the Skies (New York, 1934), p. 105.

After World War I, such adamant proclamations of the high art status of corporate towers as Bossom's gave way to a different interpretation of the artistic content of tall office buildings. Raymond Hood's design for the New York headquarters of the American Radiator Company Building of 1924, an unconventional black shaft highlighted with gold plated finials, drew strong comment for its flagrant sensationalism unmediated by the civilizing motifs of a recognizable historical style (figs. 5.11, 12).[56] In a dramatic shift from Bossom's description of corporate towers as edifying monuments and seeking to deflect the criticism that the building was inappropriate or ill-mannered as an urban monument, George Edgell reminded his readers that it was, after all, a commercial building.

> The Radiator Building is one of the latest and most sensational skyscrapers. The
> effect is theatrical to a degree that opens it to the charge of vulgarity.
> Aesthetically at night when it is artificially lighted, when the black bulk disappears
> and the gilded upper portion seems miraculously suspended one and two hundred
> feet in the air, the design has a dreamlike beauty. And if we think it a trifle crude,
> remember that it is designed to house a radiator company and not to
> commemorate a war hero nor glorify a saint.[57]

Hood's unusually aggressive treatment of the building form was also favorably reviewed because it identified the corporate presence clearly and without necessity of a stylistic lexicon. "What is that black building?" Harvey Corbett asked rhetorically in defense of the building.

> The American Radiator Building is the answer. And by that answer the first
> principle of commercialism -- advertising -- has been served.[58]

Both Edgell and Corbett saw the Radiator Building as an abstract form whose association with its corporate sponsor was unencumbered by any effort to rationalize the highrise building stylistically or according to a structural principle. In fact, Corbett went on to describe the building as though its vaguely Gothic detailing were irrelevant to one's appreciation of the overall form. Unlike either the Woolworth or Metropolitan Life towers, the Radiator Building communicated to its audience without an interceding stylistic language. Hood's proposal to make the tower black in order to conceal window openings further excised from the object any meaning which might have

---

[56] Hood's choice of black, reminiscent of the contemporary work of the Viennese Sezession, rendered the windows in the building, which normally appeared as dark voids in light toned building, invisible, thus dramatizing the tower's vertical presence. Walter Kilham, Raymond Hood, Architect (New York, 1973), p. 70.

[57] Edgell, American Architecture, p. 363.

[58] Harvey Wiley Corbett, "The American Radiator Building," AR 55 (May 1924), p. 476.

been derived from materials or its program. Having muted its tectonic and functional properties,

Hood rendered the Radiator Building transparent to its meaning as a corporate logo. The

reminiscences of Walter Kilham, an employee of Hood's, confirm the architect's intentions.

> Why not gild the top of the black building for effect by day and then floodlight it
> by night utilizing the building as a billboard itself? The owner agreed. For the
> company selling furnaces and heaters, a building that glowed in the dark like a
> torch was not such a wild idea."[59]

Hood's success was corroborated by American Radiator's subsequent advertising which used the

building, depicting it as a glowing ember shown with radiating lines of heat (fig. 5.13).

Modern Design and the Ethos of Mass Production

The iconographic program of the Radiator Building revealed a dimension of corporate

advertising that went beyond the simple communication of its presence. As the advertising

campaign itself suggested, the association between the building and the imagery of radiant heat

connected the company's products with its headquarters. More importantly, it offered a

Promethean allegory to the public, portraying the company as provider of goods and services.

The message of industrial beneficence relayed by American Radiator's advertising -- of

which its building was an integral part -- demonstrated a persistent theme in corporate advertising

in the 1920s and one which would suffuse the iconography of modern design. The rhetoric adopted

by industrial managers proclaimed the emergence of a utopia brought about by industry and the

devices of mass production. Carefully cultivated throughout the decade, this social vision predicted

unprecedented levels of production and consumption and promised elevated standards of living

and leisure to all Americans. At the core of this depiction industry appeared as a wellspring,

providing opportunities for work, distributing wages, and offering commodities by which American

lifestyles would be elevated.

Evangelists of this industrial utopia steadfastly professed their belief in the potential of

industry to serve Americans. Edward Filene, a prominent Boston merchant and one of the most

---

[59] Kilham, p. 70.

311

conscientious and aggressive industry boosters, described this condition of 'service' in a series of

publications between 1925 and 1932. "Mass production," he wrote in 1932,

> ...is not simply large scale production. It is large scale production based upon a
> clear understanding that increased production demands increased buying and that
> the greatest total profits can be obtained only if the masses can enjoy a higher
> and ever higher standard of living.[60]

Filene and other industrial utopians envisioned a terrain of perfected balances maintained between

the enlarged production capacity of industry (a result of mass-production) and the enlarged wage

scale of the "masses" which enabled them to consume those products. Filene praised the salutary

nature of industrially produced commodities, noting as well their low cost and their effective use of

new technologies. As a participant in what David Hounshell has called the "ideological vanguard

of the business community," Filene invoked the rhetoric of 'democratic capitalism' and 'industrial

democracy,' pointing out that mass-production presented Americans with a vast array of things to

buy. Proselytizers of industrial democracy portrayed the market place, Stuart Ewen has

maintained, as a 'landscape of freedom' because it provided Americans with a seemingly limitless

variety in their choices as consumers and a new territory for self-expression.[61]

In sharp contrast to the motifs of 'freedom' and 'democracy' which proliferated in these

descriptions of a new industrial order, the social model on which it was based called for strict

modes of behavior. The depictions of utopia were not merely models of future possibilities but

coercive ideologies whose goals were the transformation of American consciousness. The

particular histories of this coercion are told, for example, in the gradual transformation of the

rhetoric of industrial democracy after the war. As Joe McCartin has shown, what began as a

unionist ideology was gradually and purposefully transformed into corporatist rhetoric supporting

labor obedience and consumerism. The promise of 'democracy' with which organizers attempted

to consolidate the American working class during and after WW I was aggressively co-opted by

---

[60] Edward Filene with Charles W. Wood, Successful Living in this Machine Age (New York, 1932) p. 1, quoted in Hounshell, p. 307.

[61] Stuart Ewen termed the market place as depicted by advertising in the 1920s a "landscape of freedom." Ewen, pp. 27ff.

ideologues of industrial utopia who portrayed 'democracy' as residing within the marketplace for commodities produced by industry.[62]

This coercive action was also made manifest in Henry Ford's efforts to inspire worker loyalty and increase markets for his automobiles by raising wages. Between 1922 and 1926, Ford gradually came to understand the social implications of his models of industrial planning. Initially, he took pains to describe mass-production as a reconfiguration of productive processes. But insofar as its benefits -- more commodities, better distribution, higher wages, more leisure time -- were predicated on the necessity of consumption, the model of 'mass-production' that he popularized was not merely a strategy of industrial organization. Rather, mass-production was a social pattern which informed every aspect of daily life and which offered material benefits in return for strict conformance to its behavior categories.[63]

The task of concealing this disciplinary order behind images of a 'landscape of freedom' was complex and demanded a new arsenal of rhetorical equipment. As we have seen, industrial managers called upon advertising, whose national budgets grew thirteen fold between 1900 and 1930, to create what historian David Potter has called an iconography of 'plenty.' Within the first half of the 1920s, industrialists had also begun to patronize a wide range of design fields -- from the newly emerging disciplines of commodity and product design to architecture -- necessitating a new visual iconography of industrial utopia and setting in motion the process of evolution of modern design.[64]

The program of this iconography gradually revealed itself in the arguments made in favor of greater affiliation between industry and design. Edwin Avery Park, for example, explained how, through the devices of industrial production, 'art' had transcended its traditional affiliations with a patronizing aristocracy. By its capacity to produce cheaply and in great quantities, Park wrote, mass-production delivered to artists of this 'new age' the ability to address a vast audience whose

---

[62] Ewen, pp. 1-19, 27-30, 52; Joe McCartin, "The Failure of Industrial Democracy: The U.S. Labor Movement and the Struggle over Reconstruction Following World War I," Paper presented at the American Historical Association, NYC, (December 30, 1990).

[63] Hounshell, pp. 263-303.

[64] David Potter, People of Plenty: Economic Abundance and the American Character (Chicago, 1954); see also Ewen, pp. 59-60.

relationship to their work was direct and unrestricted by distinctions of class or standards of taste. Invoking the imagery of industrial democracy, Park imagined a new relevance for art, no longer manifesting itself in refined cultural artifacts but 'applied' to everyday objects.

> Slowly, as the immortal urge to create beauty, latent in man comes to avail itself
> of the machine, to understand its spiritual significance, and with it the world of
> industrial democracy, slowly we shall have our own art no longer a thing of the
> dead and buried past.[65]

The ideologues of modern design such as Park viewed its relationship with industry as being reciprocal and symbiotic. Whereas industry, through mass-production and mass-distribution, permitted 'art' to expand its presence within a commodity culture, modern design made it possible for industry to overcome the stultifying sameness that normally resulted from standardized methods of production.

Charles Richards, a prominent educator in the industrial arts and a prolific writer on the subject of "Art in Industry," described this relationship in a book of the same title published in 1922.[66] As did Park, Richards believed that mass-production had created the possibility of a broadly manifested 'democracy' overstepping divisions of class. "Only through quantity production and the machine," he wrote, "can the needs of modern democracy be met."[67] But, mass-production, the 'genius' of American industry, impeded variations in the form of commodities, creating an impediment to the 'improvement' of their design and setting limits to the range of alternatives which consumers experienced in the marketplace.[68] Out of this dichotomy an important tenet of modern design emerged: properly keyed to mass-production, modern design

---

[65] Park, New Backgrounds, p. 62.

[66] Charles Richards, Art in Industry (New York, 1922). Richards, an engineer trained at M.I.T., served as Director of the Department of Science and Technology at Pratt Institute from 1888 to 1898, as Director of the Department of Manual Training, Teachers' College, Columbia University, from 1989 to 1908 and Director of Cooper Union from 1908 to 1923. This report was commissioned by the National Society of Vocational Education and funded by the U.S. Department of Education and New York State Board of Education. In November of 1919, Richards was allotted $60,000 for a survey of art schools in the United States to determine the extent to which, to paraphrase Richards, designers were regarded as important and were used by industry. Frederick Pratt, David Swedden and Lewis Wilson were selected as commission members. A general advisory board was appointed which included John P. Adams, Albert Blum, Charles Cheney, William Sloane Coffin, DeWitt A. Davidson, Robert DeForest, E.W. Fairchild, Julius Forstmann, C.C. Lane, V.F. Lossberg, Albert Lyons, Lachlan McLaclan, Marc Meyer, John Oswald, Frederick Pratt, W. Frank Purdy, M.D. Rothschild, W.G. Snow, E.L. Torbert, Henry Towne. Richards describes the makeup of the committee and its funding in the preface to Art in Industry. See also Pulos, p. 270.

[67] Richards, Art in Industry, p. 474.

[68] Ibid.

could ensure variety in the appearance of industrial products without jeopardizing its rationalized methods. Insofar as 'design' expanded the realm of choice by varying the appearance of commodities, it fulfilled the promise of industrial democracy by overcoming the limits of standardization without undermining the logic of mass-production.

As was characteristic of industrial utopians, Richards conflated the expansion of the markets for industrial commodities with cultural advancement. For example, he claimed that in his efforts to improve American 'industrial arts' he had been guided by an ambition to elevate consumer 'taste' and to overcome the morally debilitating "mastery by the machine." But he argued elsewhere in Art in Industry that modern design was merely the first step toward increasing consumer markets: by improving popular taste, Richards asserted, modern design helped to produce more discriminating consumers who were, at the same time, more responsive to the alluring features of well designed products.[69]

The cycle of "education" and consumption that Richards described demanded diligence from both industry and the purveyors of 'art' in their efforts to train popular taste.[70] He expressed conviction in the capacity of modern designers to discipline their audience, to 'educate' them about desirable aesthetic features and to prepare them for their roles as consumers in the evolving commodity culture. To aid them in this task, however, he identified institutions of culture and business that were capable of disseminating the message of social regimen implied by modern design. On the business side, that message could be transmitted through well educated public relations and sales staffs that dealt with the public on a regular and intimate basis. On the side of cultural institutions, museums, magazines, and frequent expositions sponsored by industry and by

---

[69] Ibid., p. 1, 3.

[70] This notion was a precursor to that of "design obsolescence" which would emerge later in the decade. The visual novelty with which modern design could vary the appearance of commodities yielded, as Paul Mazur would explain in 1928, a method of regulating and setting order to consumer desire. But, it required diligence in the constant "training" of consumers. As Mazur would later write, "The community that can be trained to desire change, to want new things even before the old have been entirely consumed yields a market to be measured more by desires than by need." Mazur, p. 24-5.

the professional organizations of designers including those of architects could provide the venue for schooling a popular audience.[71]

Within an appendix to Art in Industry, Richards pointed to several organizations which had already commenced in "furthering the situation" on behalf of modern design. Among these were the Architectural League of New York, the Arts-in-Trades Club of New York, the Metropolitan Museum of Art, the Art Institute of Chicago and the Association of Arts and Industries.[72] The efforts of the Metropolitan Museum, in particular, offer a good example of the nature and scope of activities that Richards envisioned for these groups. Beginning in around 1917, the Museum's administration set about to demonstrate publicly that its collections were a valuable source of inspiration to designers. In that year, it held an exhibition of contemporary household objects consisting primarily of furnishings that were domestically produced and which were chosen for their similarity to pieces owned by the Museum.[73] The response of both manufacturers and the public at large -- for whom the exhibition was something of a fashion showcase -- was sufficiently positive to encourage the Trustees of the Museum to appoint Richard Bach, curator of the Architecture School at Columbia University, to a new post as Associate in the Industrial Arts.[74] Bach's primary responsibilities would be to continue the pattern of exhibition started with the 1917 show. In announcing his appointment, the Museum bulletin noted that,

> ...the Trustees took an important step in forwarding the work with manufacturers,
> designers and trade journals, a work recognized as essential now at the time of
> the ending of the war and all that means to our national industries into which
> taste and style enter as important factors.[75]

---

[71] Richards, Art in Industry, p. 473. In Art in Industry, Richards had published an essay by Henry Kent entitled "The Museum and Industrial Art" in which the author maintained that the Museum played an indispensable role in the development of American design by both permitting young designers as well as the lay public to be exposed to well designed objects. Richards himself would later expand on the theme in his book, Industrial Art and the Museum (New York, 1927), which was a report on the role of the museum in the development of European modern movement.

[72] "Agencies Furthering the Situation," appendix to Richards, Art in Industry. The first exhibitions of modern decorative arts, which included works by Peter Behrens, Walter Gropius and Henry van de Velde, were held before the war at the Newark Museum under the directorship of John Cotton Dana. See Diane Pilgrim, "Design for the Machine," in Richard Guy Wilson et al., The Machine Age (New York, 1986), p. 276.

[73] Metropolitan Museum of Art, Forty-Eighth Annual Report of the Trustees (December 1917), p. 28. The Report stated that "An exhibition showing the ways in which the Museum collections have been used by designers was arranged in one of the classrooms in March, many objects resulting from them." Arthur Pulos has suggested that, in general, museums were attempting to set themselves up as tastemakers in the 1920s. Pulos, p. 316.

[74] Metropolitan Museum of Art, Forty-Ninth Annual Report of the Trustees (December 1918), p. 29.

[75] Metropolitan Museum of Art, Forty-Ninth Annual Report, p. 29.

316

Under Bach's guidance throughout the early twenties, the Museum exhibitions of

contemporary furnishings maintained their popularity. But, the focus of the shows changed as

Bach shifted their emphasis away from work which demonstrated a relationship with pieces of an

affirmed artistic value residing in the Museum collection. Indeed, by 1924 this criteria was

officially abandoned in favor of work that was chosen on the basis of the creativity displayed by the

designer and the novelty of the designs. Bach reported very large crowds following this change.

Thus, Bach associated the Metropolitan and its status as an institution of high art with the

movement in support of modern design as an appropriate aesthetic treatment for products

available to the public.[76]

Providing an institutional support for modern design, the Metropolitan shows validated

the work of contemporary designers which it featured in both cultural and commercial terms.

Remarking on the growing reputation and high popularity of his shows, Bach wrote in 1919 that,

"no greater test of the value of art as related to progress could be offered." He continued:

> Design has been able to demonstrate its own salability which indicates a by no
> means insignificant forward step in our valuable art producing trades... This, said
> in business language, means that design sells.[77]

Moreover, Bach recognized the didactic function of his work and its importance as a mechanism

with which to propagandize modern design and canonize its iconography. He wrote,

> Manufacturers, dealers and public alike must be brought to a keener realization
> that in the art industries design is the chief selling factor, the basis of first
> appeal...Unless every member of the team (makers, sellers, teachers or users of
> industrial art) knows his place, his work and especially his responsibility, the
> success of the unit will always be problematical and surely retarded.[78]

The content of these exhibitions reveals the changing relationship between 'Art and Industry'

within the decade. Having started out as a means of rendering commodities appealing to an

---

[76] Richard Bach, "American Industrial Art," in Bulletin of the Metropolitan Museum of Art 19 (January 1924): p. 2-4. See also Richard Bach, "Contemporary American Industrial Art," in Bulletin of the Metropolitan Museum of Art 24 (October 1931): pp. 226-8. Bach notes in this article that the exhibition in 1926 included pieces whose designs were new and "started" from scratch.

[77] Richard Bach, "The Museum as a Laboratory," Bulletin of the Metropolitan Museum of Art 14 (January 1919): pp. 2-5.

[78] Richard Bach, "On the Road to Better Design," Bulletin of the Metropolitan Museum of Art 22 (July 1927): p. 197.

audience, modern design acquired a new programmatic direction fixing the rigorous behavioral

model imposed by an industrial utopia.

The Vocabulary of Modern Design: The 1925 Exposition

The value of modern design to the ideological program of industrial utopians depended on

its capacity to operate within methodological and iconographic boundaries. Richards, for example,

described modern design as an "applied" art whose treatment of commodities changed their

appearance without impeding on the methods of "quantity production."[79] He also remarked that

the symbolic program of industrial utopia demanded a non-traditional motif which visually

documented both the novelty of the commodity culture it proposed and the demise of traditional

lifestyles it encouraged. Therefore, he discussed the need for modern designers to abandon the

methods of historical eclecticism especially when they drew on European precedents. In its

departure from conventional stylistic motifs, Richards insisted, modern design signified the

transcendence of modern American industrial culture over both its own limited past as well as a

class-bound European culture that was unable to take full advantage of the social potential of

mass-production.[80] Consequently, modern design gave visual proof to the claims of American

industrial leaders who predicted the advent of a new world order in their country before any other.

But despite the precision with which Richards crafted this program for modern design, he

could not point with conviction to American examples of an emerging vocabulary that fulfilled the

tasks he had identified. Although material exhibited at the Metropolitan shows after 1924 no

longer had to express a dependency on the museum's collections, few of these pieces were

evidently mass-produced.[81] Designers of tall office buildings who had cultivated novel forms out of

the zoning ordinance and in full compliance with modern methods of construction technology

came closest, as the designer, Leon Solon, would later conclude, to fulfilling the aesthetic program

---

[79] See, for example, Richards, Art in Industry.

[80] Ibid., p. 3.

[81] As Diane Pilgrim has noted, these designs were novel but not evidently "mass produced." Pilgrim, "Design for the Machine," p. 276. The Museum did not demonstrate an interest in "quantity production" until 1927. In the early twenties the material included in these shows still incorporated luxurious and expensive materials which required hand crafting.

of modern design.[82] Yet even in the case of projects such as the Shelton or Radiator Buildings, their architects had resorted to historical styles in the execution of ornamental details. Modern design awaited a suitable vocabulary of form which achieved both a visual newness and the 'aesthetics of plenty' demanded by an industrial utopia based on mass-production.

In late spring of 1925, the Exposition International des Arts Decoratifs et Industriels Modernes opened in Paris and produced an immediate and tangible source for such a vocabulary in the United States. The definition of 'Modern Industrial and Decorative Art' instituted through the fair corresponded to the program for modern design outlined by Richards: in the formulation of entrance requirements for the fair, its organizers had stipulated that all material entered had to show, "new inspiration and real originality....Reproductions, imitations, and counterfeits of ancient styles" were strictly prohibited.[83] At the same time, the angular and geometricized patterns and exotic coloration which characterized the exhibitions of the fair and later came to be called the 'Art Deco,' suggested new directions for the development of a formal vocabulary of modern design.

Originally scheduled to take place in 1913 by the French Ministry of Art as a response to other continental trade fairs, the exposition received attention in the United States even before it opened. In Art in Industry, Richards had warned the American cultural establishment that the French government intended it as a means of putting their consumer products industries in the forefront of international design. But, Richards' statements did not dissuade Herbert Hoover, as Secretary of Commerce, from vetoing American participation in the fair despite the guarantee from the French for a privileged location as one of the four axis powers. The exclusion of the United States from this evolving 'modern movement' combined with the ominous predictions made by Richards that this would result in heavy losses by American manufacturers to foreign producers magnified popular attention and contributed to the feeling that the fair was a vital design source.[84]

---

[82] Paul Frankl, New Dimensions: The Decorative Arts of Today in Words and Pictures (New York, 1928), p. 61.

[83] Quoted from Charles Richards et al., Report of the Commission Appointed by the Secretary of Commerce to Visit and Report Upon the International Exposition of Modern Decorative and Industrial Art in Paris, 1925 (Washington DC, 1925), p. 17.

[84] The fair marked one in a series of important international expositions in which the design of industrially produced goods was of primary importance dating back to 1878 (Paris), 1890 (Paris), 1914 (Cologne). Pulos has observed that Hoover declined because he did not sense an immediate interest in participating among American industrialists.

Under pressure from concerned designers, merchants and industrialists in the spring of

1925, Hoover commissioned a report on the behalf of the U.S. government to document the fair

and assess its importance to the so-called 'art industries.'[85] Under the direction of Charles

Richards, a committee of 110 delegates (which included Lincoln Filene, a relative of Edward

Filene, Hiram Bloomingdale, Richard Bach, and architects and AIA members, D. Everett Waid,

William Emerson, Charles Butler, and Howard Greenley) visited the fairgrounds in May and made

its assessments of the impact of modern design in the separate art disciplines ranging from textiles

to architecture. In its report to Hoover, the Commission concluded that the "modern movement"

evidenced by novel motifs and a rejection of stylistic precedent was vital and necessary to the

expansion of consumer markets.

> The nation which most successfully rationalizes the movement and brings its
> expression into terms acceptable and appropriate to modern living conditions and
> modern taste will possess a distinct advantage both as to its domestic and foreign
> trade.

But the Commission went further in its commentary to note that the nature of this "modern

movement" was fundamentally different in the American context than in the European.

> The problem of developing a new quality of industrial design in America is very
> different from that in Europe. There the small establishment and small output
> renders variety design comparatively natural and simple as contrasted with our
> practice of mass-production. In the latter case the expense of new patterns
> largely experimental in their nature, naturally tends to conservatism.[86]

Thus, from the perspective of the members of the Commission, the potential as well as the

limitations of this "modern movement" in the United States were defined by the presumed

relationship between modern design and mass-production.

In contrast to the American reaction, European critics did not regard the exposition as

having fulfilled the promise of a new and forward-minded development in the applied arts. Many

were struck by the detachment from the social and economic conditions of post-war Europe that

they sensed in the designs for the fair's exhibits and pavilions. Having portrayed the simultaneous

---

Pulos, p. 301. On the history of the fair see also Frank Scarlett and Marjorie Townley Art Decoratifs, 1924 (London, 1975); and Creese pt. II, pp. 11-12.

[85] Richards et al., Report of the Commission.

[86] Ibid., pp. 21-23.

presence of productive potential and dramatic social need in the wake of World War I as pressures

for change in his 1922 book, Vers Une Architecture, the French architect, Le Corbusier, now

launched a critique of the excessive ornamentalism of the "Arts Decoratifs" in his Pavilion de

l'Espirit Nouveau, which opened with the exposition. Less critical observers also remarked on the

shortcomings of the exposition: H.P. Shapland, a contributor to the report produced by the British

Board of Overseas Trade on the Exposition, anticipated a "new art" inherent in both the economic

and political changes introduced by the war and the new-found power of science and technology

the war had revealed. What Shapland found, however, was that the furniture design, textile

patterns, graphic arts, and buildings exhibited at the exposition did not offer themselves as

prototypes for mass-production. This indicated to him that their designers neither availed

themselves of the new productive potential of industry nor sought to address the diverse and newly

enfranchised European audience.[87]

Still, Shapland found the formal attributes of the designs of the French and others to be

distinct and, insofar as they resisted any use of historical forms, adequate to fulfill the letter of the

entry guidelines. He regarded the furniture designs in particular to be rigorously simple,

frequently relying on tight geometries in their overall form and decoration (figs. 5.14, 15). These

qualities were mimicked in the architecture of the Exposition. The French pavilions -- especially

those whose forms derived from reinforced concrete construction -- were volumetrically direct,

incorporating setbacks and repetitive elements (whose similarity to the forms of the setback

skyscraper Americans were quick to point out). While not the product of mass-production itself,

this formal vocabulary contained elements that referred to the methods of industry and projected a

'machine aesthetic.' The circular motifs of the transom window in the pavilion of the department

store of Bon Marche by L.H. Boileau, for example, alluded to the precise rotations of machinery

and the pavilion of Lyons-St. Etienne by Tony Garnier recalled the formal purity and staccato

rhythm of his idealized proposals for a Cite Industriel prepared between 1904-17 (figs. 5.16, 17).

The visual themes of circularity and repetition are evident also in Pierre Patout's Porte de la

---

[87] Board of Overseas Trade (UK), Reports on the Present Position and Tendencies of the Industrial Arts as Indicated at the International Exhibition of Modern Decorative and Industrial Arts, Paris 1925 (London, 1927), p. 9-38.

Concorde which called to mind the image both of a circular temple-form and of rotary motors and magnetos, a reference corroborated by the electric lanterns surmounting each tower (fig. 5.18). In his Austrian pavilion, Josef Hoffman indulged in a similar imagery by forming the building's skin in the profile of a mechanically extruded molding, a depiction made more emphatic at openings 'sliced' into the volume (fig. 5.19).

As Edwin Park pointed out to his American audience, the exposition recommended a vocabulary of form which would be easier to reproduce mechanically and which was, therefore, consistent with the methods of mass-production.[88] But, as its European critics had sensed, the resulting 'machine aesthetic' also fetishized industrial technology: in the rooftop pavilion by Hoffman completed for the 1925 exposition, the architect usurped the triangulated pattern of the structural members of a crane arm by applying it to the glass volume below as an ornamental motif with no structural rationale (fig. 5.20). Similarly, the Polish Pavilion, singled out by Park for its stunning effect, manipulated a light constructional system to produce a gem-like form without, however, giving that technology any tangible presence (fig. 5.21). The representation of industrial technology was manifested in a more explicit iconography as well: the frequent appearance of the fountain motif as in the decorative iron work of Edgar Brandt or in the decorative forms used by Henry Favier and Andre Ventre in their Gate of Honor invoked the image of industrial bounty by equating industrial production, symbolized by the pure geometries and machine-like precision of these forms, with natural phenomenon such as the gushing waterjet (fig. 5.22, 23).

The geometric simplification of the Art Deco also merged with a primitive and visceral imagery evident in, for example, the work of the designers Paul Poiret (who proposed employing unschooled girls to produce fresh motifs based on their unfettered interpretations of natural forms), Sonia Delauney, and Raoul Dufy (figs. 5.24, 25).[89] Likewise, the architects Sauvage and Wybo exploited a fantastic association with the netherworld and an affiliation with an exotic, pre-

---

[88] Park, New Backgrounds, pp. 137-8.

[89] Bevis Hillier, The World of Art Deco (New York, 1970), p. 34. As numerous histories have demonstrated, the formal sources of the "Art Deco" were diverse, combining elements from the work of, among others, the Scottish architect, Charles Rennie Macintosh, the Wiener Werkstaette, and the set designs by the choreographer, Dhiagalev, as well as African tribal art and Cubism. See also Giulia Veronesi, Stile 1925 (Florence, 1978). On Poiret see Scarlett and Townley, Art Decoratifs, pp.48-60;

modern culture in their design for the pavilion of Primavera, the design studio of the department store Printemps, by merging a tomb-like conical mound with a portico whose columns borrowed the Egyptian imagery of bundled papyrus (fig. 5.26). As Bevis Hillier has pointed out, this strange synthesis of diverse motifs revealed a broadly manifested "European" desire both to reject the overly civilized culture discredited by the occurrence of World War I and to establish a new universalized formal vocabulary which preempted conventional stylistic languages.[90] The application of such motifs to normal commodities -- fabrics, clothing, furniture, and the like -- or to the buildings housing department stores demonstrated a curious overlap which existed in Paris between an art-producing avant-garde expressing social discontent and a commercial culture which manipulated formal novelty in order to expand 'haute couture.'

In the United States, the aspiration to overcome traditional styles produced a similar fascination for 'new' form. But unlike European designers, American modernists had no comparable societal disaffection for mainstream culture on which to draw: World War I had left the American continent unscathed and its political and economic system intact and vindicated. Instead, the American fascination for a universal language drew its inspiration from the American cult of advertising and the prioritization of a formal language capable of displacing the class-bound conventions of high art. This was demonstrated by the American reviews of the Paris fair. For example, Ellow Hostach suggested that the forms that characterized the fair's architecture had a simple, non-intellectual basis which communicated directly to their viewers.[91] And, this simplicity and baseness -- which Solon described as producing "a complex effort through the defiance of all those principles which governed ornamental rhythm in the past" -- imparted to this 'style' an aura of universality which overcame peculiarities of taste formed by social background or education. Armed by modern design with a language of form that was both aesthetically consistent with mass-

[90] Hillier, Art Deco, p. 34.
[91] Ellow Hostach, "Reflections on the Exposition des Arts Decoratifs," AF 42 (January 1926): p. 11.
[92] Leon Solon, "Will the Exposition Regain Artistic Leadership for France," AR 58 (October 1925): p. 391.

production and accessible to the masses, 'Modern industrialism' could perform , as Richard Bach

would later write, "as a leveler and an instrument of democracy."

Modern Design in the United States, 1925 - 1930

In the wake of the exposition, American architects and designers spoke prophetically of its

importance to domestic trends. Ely Jacques Kahn, a Paris-trained architect practicing in New

York, felt that the exposition demonstrated an "evolutionary" process unfolding in Europe whose

outcome was certain "in spite of any effort of restraint."[94] Leon Solon, who reported on the

exposition in the pages of Architectural Record, suggested that in neither the design of consumer

goods exhibited there nor in its architecture was the fair's significance disputable. In architecture,

the exposition provoked a "revolutionary species of artistic curiosity" which spelled the end of the

use of historical precedent.[95] In the design of consumer goods, the exposition demonstrated the

commercial necessity of novel motifs. "The sudden interest in decorative excellence," Solon wrote,

"is a policy of expediency compelled by the extraordinary improvement in public taste and the

economic value of artistically treated goods."[96]

Despite the conviction of these reviewers, there was little historical evidence to show that

the modern movement would have an impact in the United States. The American public was not

unfamiliar with novel styles popularized by the exposition or their European sources. Large

crowds had witnessed first hand the paintings and sculpture of a European avant-garde exhibited in

the so-called "Armory Show" which opened in 1913 in New York City. As in the 1925 Exposition,

that event had popularized the idea of 'modern art' as a rejection of an 'acquired past' recorded in

historical styles. Following the war, New Yorkers had access to the work of the Wiener

Werkstaette through its American showroom opened there in 1920 by the Austrian architect,

Joseph Urban. Urban sponsored shows in a number of cities throughout the United States before

---

[93] Richard Bach, "Art in the Marketplace," in Charles Beard, ed., Toward Civilization (New York, 1930), p. 200.

[94] Ely Jacques Kahn, "The Architectural League Exhibition of 1926," AR 59 (March 1926): pp. 226-7.

[95] Solon, "Will the Exposition Regain Artistic Leadership," p. 391.

[96] Leon Solon, "The Report of the International Exposition of Decorative and Industrial Art in Paris, 1925," AR 61 (February 1927): pp. 181-82.

closing the society in 1923. Reaching more broadly than Urban, John Cotton Dana, director of the

Newark Art Museum, curated several shows of the Deutsche Werkbund beginning in 1912 which

travelled extensively throughout the United States. But, despite their timely relationship to

European art movements, these and other events failed to inspire a widespread acceptance of a

modern movement. As late as 1925, for example, the Art-in-Trades Club, an organization

representing designers and manufacturers of furnishings and consumer products based in New

York City, proposed to sponsor an exhibition of modern 'ensembles' or furniture groupings by

American designers. The show was canceled when the organizing committee disqualified all

entries because of their dependence on traditional motifs.[97]

    The Paris fair marked a point of transition, however. As we have seen, to Charles

Richards it had been clear that the reluctance on the part of manufacturers, merchandisers and

their advisers within the design community to seek out a modern idiom was due to their fear of

alienating consumers whose tastes had been stunted by the incessant repetition of standardized and

mass-produced commodities. The exposition offered an opportunity to change this condition by

rendering modern styles fashionable. The impact of the exposition was also sustained by a new

American affluence. Having overcome the post-war depression and labor strife in the early

twenties, Americans exhibited a sense of security and a willingness for experimentation that

characterized their behavior in the 'roaring twenties.' Moreover, radio, fast trains, and the

automobile combined with other icons of the 'New Age' such as the set-back skyscraper to produce

dramatic evidence of the emergence of an era characterized by new patterns of living. This

contributed to the popular acceptance of the idea advanced by, for example, Paul Frankl in his

book, New Dimensions (New York, 1928), or E.A. Park in his book, New Backgrounds for a New

Age (New York, 1927) that a new aesthetic direction was immanent after 1925.

    But it is equally important and remarkable how a diverse and committed network of

culture moguls, designers, industrialists, and retailers assumed the task of disseminating modern

---

[97] On the Armory Show as a rejection of an "acquired past" see Meyer Shapiro, "The Introduction of Modern
Art in America: The Armory Show," in Shapiro, America in Crisis (New York, 1952), pp. 203-42, reprinted in Shapiro,
Modern Art, 19th and 20th Centuries (New York, 1968), pp. 135-78. On the Wiener Werkstaette and Deutsche
Werkbund in the United States see Creese, pt. II, p. 6.

design in the United States in the 1920s. They directed their first efforts to popularizing the exposition and ensuring that the Art Deco was accepted as both an important fashion statement and as a goal of cultural advancement. This program revealed itself in an unusual alliance between professional organizations such as the American Institute of Architects, the Arts-in-Trades Clubs and the Architectural League of New York, cultural institutions such as the Metropolitan Museum and the American Association of Museums, and manufacturers and retailers of consumer products.

Among the first efforts to institute modern design as a popular convention were those of the department stores, John Wanamaker and Lord & Taylor in 1925.[98] Seeking to incorporate the strategy employed by Parisian stores, Lord & Taylor developed its own design department responsible for assembling modern furnishings in rooms decorated to create visually coherent settings.[99] The result was a simplified version of interiors shown at the exposition in which bold colors and geometricized patterns were evident in the decoration of walls and fabrics (fig. 5.27). Far more compelling was the exhibition sponsored by Wanamaker's in that year which featured Hugh Ferriss' Titan City drawings (fig. 5.28).[100] In the midst of these renderings depicting a forward-minded conception of urban form, Wanamaker included apartment interiors whose furnishings were, as had been the case with Lord & Taylor, designed with bold colors and patterns. The interior by the Russian designers Vladimir Bobritsky and Victor Havemann, collaborators hired by Wanamaker, was the most stunning, merging repetitive, angular and circular geometries in an image that recalled both Constructivism and of the iconography of motion and speed characteristic of Futurism (fig. 5.29).[101]

---

[98] The Hoover Commission report on the 1925 fair had already discussed the role of department stores in the United States as purveyors of industrial culture. They wrote, "In our country the great department and specialty stores are veritable museums of applied art. They are also very important agencies in the education of public taste. The administrative organizations of these stores have the most intimate contacts with the public demands and better opportunities for gauging these demands than any other agency," Richards et al., Report of the Commission, p. 68.

[99] On the development of "Ensembles" see Kenneth Frampton and M. Vellay, Pierre Charreau (London, 1985), pp. 61-65; see also Creese, "Notes," pt. II, p. 8-9.

[100] Park, New Backgrounds, p.170; Leon Solon, "The Titan City Exhibition," AR 59 (January 1926): p. 94. See also Carol Willis, "The Titan City," Skyline (October 1982): pp. 26-7.

[101] Creese, pt. II, p. 15.

Following closely behind the Paris exposition, the work exhibited in these shows demonstrated important aspects of the symbolic program that modern design served. For example, the juxtaposition of Ferriss' vision of urban futures and the interiors by Bobritsky and Haveman suggested the value of modern design to the task of formulating an iconography of industrial utopia. Whereas the first symbolized a modern lifestyle implicit in the transformation of cities through the forces of technology and commerce, the second represented those forces reaching into and altering the environments of individual Americans. Thus, within the imagery of the Wanamaker exhibition there is evidence of a desire to prepare its audience for the changes implicit within the commodity culture anticipated by industrial utopians.

These interiors also demonstrated a characteristic relationship between modern design and social status implied by the objects and setting to which it was applied. In these and other exhibitions which would occur throughout the late twenties, modern design was typically portrayed alongside images of wealth and social stature, implying that it served as a medium of upward social mobility. This imagery was advanced by seemingly marginal events which became entwined in the momentum of the early modern movement. In 1927, Creese points out, the arrival of the Ile de France in New York, its interiors decorated by French 'ensembliers,' further invested the modern movement with a social utility, its forms and methods associated with the activities of modern, sophisticated, and socially desirable activities (figs. 5.30, 31).[102]

As Richards had suggested in Art in Industry, a wide variety of cultural and commercial organizations were capable of disseminating modern design. In 1926 at its 41st annual exhibition, the Architectural League of New York showed furniture and artwork from the Paris exposition.[103]

---

[102] Walter Creese suggests that the arrival of the Ile de France, a steamship whose interiors were designed and outfitted by the same Parisian department stores which had supported designers such as Ruhlmann, Sue and Mare at the 1925 Exposition, caused an even greater commotion for the new style. Creese, Pt. II. For a contemporary review see "Interiors from the Ile de France," AR 63 (January 1928): pp. 62-4.

[103] See feature article, NYT, 31 January 1926, 4:14; also "The League Exhibition," AF 44 (April 1926): p.52. The League had exhibited furniture, sculpture and architectural ornament since 1917, according to Leon Solon. In a review of the show in 1925, Solon described the role which objects that were more easily understood by the layman than architectural drawings played in attracting an audience. "It was surmised that the first step in appreciation by the uninformed might be made through the inherent attractiveness of the decorative arts, leading ultimately to a more intelligent and general interest in architectural design....Year by year, the importance of decoration and the applied arts was emphasized, with the attention of the public appreciably veering to the main architectural issue. As a result of this circuitous educational process a greater degree of popular interest in architecture has now been stimulated....Popular

In the same year, Richards himself made good on this strategy and sought out the support of the

American Association of Museums to organize a travelling exhibition of furnishings and interiors

from the exposition.[104] Travelling to Boston, New York, Cleveland, Detroit, Chicago,

Minneapolis, St. Louis, Pittsburgh and Philadelphia, the show was intended as a means of

educating Americans about the 'new' art, and of exposing them to the iconography of modernism.

Endorsed by an organization representing cultural institutions and thus unencumbered by

the stigma of commercialism, Richards could legitimately advance the position in the exhibition

that modern design had profound cultural implications, promising both to rejuvenate artistic

expression in the United States and to change the appearance of the commodities. "For the past 25

years and more a new style in decoration has been developing in Europe," Richards wrote. He

continued:

> It has thrown overboard the copy and the pastiche which the topsy-turvy 19th
> century in the throes of industrialism substituted for original creation. It strives
> to embody old principles in new forms of beauty and to meet new conditions of
> living with frankness and understanding.[105]

Thus, modern design fulfilled the symbolic program of industrial utopia by projecting the image of

a new world order accessible through industry and its artistically treated products. Objectified and

characterized by Richards as a purifying social force, modern design struggled with "pastiche,"

mediated between "industrialism" and "original creation," and accommodated new patterns of

living. By its presence, modern design brought order to social as well as aesthetic disorder and

embodied industrial utopia. With this potent iconography in mind, Edwin Park was moved to write

that, "History is being made as this exhibition slowly tours our land."[106]

---

imagination was appealed to by the magnificence of the setting and arrangement of exhibits; architecture was posed as a
princely art surrounded by its attendant crafts; the fundamentals of good taste have been implanted in the minds of
thousands, where previously no idea existed of the part architecture plays in public and communal life, or of the
magnitude of its scope." Leon Solon, "The Exposition at Grand Central Palace: Education Policies of the Architectural
League of New York," AR 58 (July 1925): pp. 27-38.

[104] See "Modern Decorative Arts: A Loan Exhibition," Bulletin of the Metropolitan Museum of Art 21
(February 1926): p. 36; and "An Exhibition of Contemporary European Industrial Arts," Bulletin of the Metropolitan
Museum of Art 21 (January 1926) p. 2. The show itself consisted primarily of work of French and Swedish designers, a
fact which was significant in itself for whereas the French designers had been credited with first giving form to the modern
movement the Swedes had received several awards at the fair for their designs. Thus, the show represented the best of
the fair.

[105] "Modern Decorative Arts: A Loan Exhibition," p. 36.

[106] Park, New Backgrounds, p. 163.

Yet, behind the apparent division between commercial and cultural patronage lay a

common goal, namely the fabrication of an aesthetic language whose symbolic content was

properly tuned to the iconographic program of industrial utopia.[107] The nature of this alliance was

revealed in, for example, the decision by the directors of the Metropolitan Museum to establish a

liaison with the department store, R.H. Macy, and to work as joint sponsors of an exhibition of

modern interiors: in 1927, the Metropolitan co-hosted the first Art-in-Trade Exposition with the

retailer. Installed in the store itself, the show included work by prominent French designers such

as Jacques Ruhlman and Pierre Charreau.[108] As the principle coordinator working on behalf of

both sponsors, Richard Bach planned a formidable opening for the show: Charles Richards and

Harvey Wiley Corbett (among others) addressed the group, reiterating that modern design both

symbolized and resulted from the imminent evolution of industrial culture. But it was Robert

DeForest, director of the Metropolitan Museum, who explained most lucidly the symbolism

implicit within the affiliation of the museum and the department store. He noted that in the

museum the visitor could only passively enjoy the "art" he or she observed. But in the department

store, viewers were able to express and consummate their aesthetic desires for artistic commodities

by purchasing them.

> Within an individual's price limits the shopper can exercise his discriminative and
> selective faculties to his heart's content and his success will be compared with the
> results achieved by his friends in their shopping. Thus, there opens out a cultural
> plane which is animate, sensitive to suggestion and responsive to progress; and
> the department store is the focus of radiation.[109]

Thus, DeForest portrayed the commercial environment of the store, the arena of consumption, as

the territory in which Americans were best able to experience the 'landscape of freedom' created

by industry. Moreover, the union of museum and store had important cultural implications,

---

[107] Richards would later endorse this idea as did the Hoover Commission. Richards et al., Report of the Commission, p. 68.

[108] Walter Creese suggests that the Macy's show, directed by Lee Simonsen and sponsored in part by the Metropolitan Museum of Art represented the first attempt to show American designers working in the vein of design established by the fair of 1925. Furniture by Aline Bernstein, Paul Frankl, W. Kantauch, W. Reis and Hunt Diedrich was shown. Public lectures were given by Richards, Bach, Corbett and Paul Manship. See Creese, pt. II.

[109] Robert De Forest, "Art in Merchandise: Notes on the Relationship of Stores and Museums," Metropolitan Museum of Art Industrial Art Monograph 4 (1928), reprinted as "Getting in Step with Beauty," in American Review of Reviews (January 1928): p. 5.

imbuing modern design with a value both as a commodity aesthetic and as an artistic movement.

"The result has been," DeForest concluded, "most important commercially because the modern

movement has been popularized by bringing its production within range of the average purse and

thus permitting general participation in an artistic movement which has caught the spirit of the

times."[110]

DeForest and other proponents of modern design drew inspiration from contemporary

events which contributed to their conviction in the importance of 'Art in Industry.' By the time

DeForest had made his comments about the value of collaboration between museums and

retailers, the symbiosis of modern design and industrial production had been forcefully

demonstrated by the competition between General Motors and Ford Motor Company which pitted

Ford's austere Model T against the design variety of GM cars.[111] Posing design variation as a

refutation of Ford's policy of standardized production leading to low unit prices, GM president,

Alfred Sloane, theorized that consumers could be both coaxed away from the sameness of his

competitor's brand and inspired to buy according to changes in an automobile's style rather than its

performance. The importance of design as a means of varying commodities that were otherwise

alike placed emphasis on its capacity to depict a visual novelty from one year to the next. To

marketers attempting to maintain sales of products such as automobiles, 'design obsolescence' also

became a factor in the equation of supply and demand as new designs outmoded older ones. But,

design variation as practiced by Sloane's company also acted as a reinforcement of the ideology of

industrial utopia, extending the landscape of freedom by ensuring diversity among industrially

---

[110] Ibid., p. 9.

[111] The plight of the Model T had in fact represented something of a high point in the gradual ascendence of industrial design. Ford's final abandonment of the Model T configuration came after he had produced 15 million cars. Its failure was attributed to the growing influence of General Motors which offered greater variety and more design options. Designers regarded its passing as evidence of the truth in the maxim that design sells. After all, the Model T had represented the epitome of industrial production which had made it possible to produce a commodity that was commonly accessible and whose price was low due to the quantity of its production. Yet despite the success of his production methods in reducing costs, Ford had been forced to change the design of his basic model due to competition from General Motors which offered a variety of options in the appearance of its cars. Hounshell, pp. 264-5, 304. See also Meikle on the design of automobiles in the 1920s.

produced commodities. "Newness of style," Paul Mazur wrote in 1928, "became the new order of the day."[112]

Designers understood both the profound agenda which this marketing strategy produced for modern design as well as the opportunities it opened for them. In 1928, Paul Frankl observed the situation at Ford and General Motors and proclaimed that the "artist" was a savior of industrial culture.

> It would...be correct to say that the industries which seem tottering and about to dissolve are those which are paying no attention to the artistic factor. The original Ford car itself is a good example of this. The machine was good and was perfected to do the work for which it was designed but without artistic consideration it finally lost ground and all the engineers in America were unable to contribute any vital factor to recover the business. It was up to the artist to save the situation.[113]

Armed with the methods of modern design, artists displaced the engineer as the facilitator of modern industrial utopia.

Their social function intact by the late 1920s, designers attempted to expand the symbolic range of modern design. Their efforts to encourage an iconographic evolution, however, were contained within an overarching program to improve the value of modern design to the ideology of industrial utopia. A comparison of the Wanamaker interiors of 1925 to the Art-in-Trade Exposition of 1927 points to the presence of these selective criteria: whereas the Wanamaker interiors and Titan City images depicted imminent change in daily life wrought by technology, industry, and its products, the Art-in-Trade Exposition celebrated the ability of modern design to diversify the commodities in consumer markets, thus expanding the 'landscape of freedom' projected by industrial utopia. In the first instance, modern design conveyed the impression of industrial progress through novel imagery supplied by architecture and modern art. In the second instance, modern design produced design variety and thus reinforced the 'democratic' promise of industrial production.

---

[112] Mazur, p. 24-5.

[113] Frankl, New Dimensions, p. 60. See also Sheldon and Martha Cheney, Art and the Machine (New York, 1936); and Norman Bel Geddes, Horizons (New York, 1932), p. 14.

Within the second half of the 1920s, the symbolic content of modern design expanded further. Whereas modern design initially invoked visual metaphors of industrial utopia evident in the 'machine aesthetic,' then alluded to the advent of an industrial cornucopia portrayed by 'visual newness,' it later assumed a new symbolic task suggesting that the products of industry and mass-production facilitated modern life by lightening workloads and increasing the quality of leisure time. No less aggressive a proponent of modern design than Richard Bach outlined this new agenda. "The fact remains," Bach wrote,

> ...that the increasing availability of relatively inexpensive objects for the home
> environment, apparel, transportation and other latter day requirements which has
> been brought about by the machine has at the same time accustomed us to expect
> much more of life, notably in the form of working ingredients, things, some inert,
> some as substitutes for human energy but all conceived first as useful and then as
> attractive....To own them is no longer a privilege but a necessity and our status as
> members of society is largely measured by our ownership or use of necessities
> which our grandparents might have regarded as sheer luxuries.[114]

Sheldon Cheney has identified 1927 as the year of transition in which the focus of modern designers shifted from "advertising" which portrayed imminent change through a visual rhetoric of newness and celebrated the "freedoms" implied by industrial democracy to "product design" which enhanced the apparent utility of commodities and stressed their labor-saving and health promoting attributes.[115] Writing three years later, Richard Bach gave voice to this view:

> If in the democracy of today...the simple citizen can surround himself with a
> greater degree of elegance and comfort than ever before this also is to be set
> down among the spiritual things machine civilization has made possible for it has
> amplified his life, increased its resources and released time for leisure.

Rather than increasing the "beauty" of an object, Bach suggested that modern design increased an object's efficacy as a labor saving device. "Utility is the fervent gospel of the age: the industrial arts begin with utility."[116]

This expanding iconography corresponded to a changing political and social climate in which the agenda of co-opting the rhetoric of worker dissent was less pressing then it had been in the first half of the 1920s. By 1925, union membership had begun its decline and in 1928,

[114] Bach, "Art and the Market Place," p. 202.
[115] Cheney, Art and the Machine, pp. 14-16.
[116] Bach, "Art and the Market Place," p. 210.

Americans elected Herbert Hoover as President, confirming the popular acceptance of industrial utopianism manifested in Technocracy and the cult of the engineer which propelled him in his political career. Thus, in the late 1920s, the design discourse produced an overlapping iconography which merged both visual newness, signifying imminent change and the demise of traditional culture, and design variety, which celebrated the industrial cornucopia foretold by industrial utopians, with a new rhetoric expounding the utility of industrially produced commodities.

This intertwining symbolism was evident in the second Art-in-Trade Exposition in 1928 -- again hosted by Macy's and the Metropolitan Museum. Based on the French-inspired 'ensemble,' the show featured integral room designs for urban apartments. The exhibits drew on other European trends popularized by the 1925 exposition and included work by prominent French designers as well as the Austrian, Josef Hoffman, whose atechtonic forms and strong coloration had been influential in the designs of furniture and buildings at the Paris fair. The influence of the Art Deco was evident in the central fountain by the stage and exhibition designer, Lee Simonsen, which recalled the style's iconography and characteristic geometricized forms (fig. 5.32). In their selections, the organizers also revealed their desire to make manifest an indigenous modernism inspired by European trends but responsive to the unique conditions of American industrial culture. For example, Macy's commissioned rooms by the Austrian-born Los Angeles architect, Kem Weber, the New York architect, Ralph Walker, and the Swiss emigre, William Lescaze. Recognizing this aspect of the show's content, Architectural Record began its review of the show by asserting that,

> The modern interior suited to the conveniences of modern life and utilizing the
> materials produced by machinery and mass-production has been long in assuming
> a tangible form in America.

But, it was in their descriptions of the agenda of the modern designer that the organizers clarified the unique aspects of this American modern movement: Lee Simonsen, reported to the Record that the exhibition represented a "revolt against current practices by architects failing to perceive the needs of present-day life." "Half the discomforts of living in city apartments," Simonsen wrote, "are due to their bad planning." In concluding, Simonsen asserted that modern design was

distinguished by its focus on the "needs of life today" to which it responded. What characterized modern design, therefore, was its facilitation of modern lifestyles.[117]

This agenda was less evident in the work of the European designers which ranged from the stripped classicism of the Italian architect, Gio Ponti, to the highly decorative interior by the French designers, Jourbet and Petit (figs. 5.33, 34). Among the foreign work, that of the German, Bruno Paul, was distinguished by its clean and simple detailing (fig. 5.35). Of the American designers, William Lescaze's "Penthouse" contained the most unusual furnishings such as a chair consisting of flat planes that recalled the designs of Gerrit Rietveld (fig. 5.36). As with Bruno Paul's interior, Lescaze minimized decorative patterns, imparting to the space a severity somewhat at odds with the clutter of objects it contained. It was the work of Kem Weber that best fulfilled Simonsen's challenge to modern designers to demonstrate their responsiveness to "present-day needs." His interiors for a "Living Room-Bedroom" and an "Alcove-Kitchenette" displayed a severity similar to that of the work of Bruno Paul (figs. 5.37, 38). But, as their names implied, Weber intended that these spaces accommodate several activities thus demonstrating the spatial efficiency which modern design made possible.

Yet, despite the visual messages declaring the responsiveness of these designs to the "needs" of daily life, the spaces designed by Weber and his fellow exhibitors accommodated only those patterns of use defined and canonized by industrial utopia. With one exception, the rooms brought to mind images of leisured lifestyles surrounded by modern commodities. Only Weber's "Kitchenette" implied a response to household work activities and even here the cooking area was reduced to little more than a ritualistic niche. Even his finely detailed, dual purpose "Living Room-Bedroom" seemed to resist the informal activities of the bedroom. Furthermore, the presumed urban location of all of these rooms imparted an artificiality to the impression of the 'home' they conveyed. Thus, even in their service to modern lifestyles, these interiors portrayed a necessary pattern of behavior which was urbane, polite, formal, and dependent on the commodities it contained.

---

[117] "The Macy Exposition of Art in Industry," AR 64 (May 1928): p. 137. See also Pulos, pp. 318-321.

Both the emerging rhetoric of utility and the disciplinary order implied by modern design were further articulated in the Metropolitan Museum's Eleventh Annual Exhibition of Industrial Art held in 1929. Richard Bach together with the designer Leon Solon had proposed to the Museum's Advisory Committee on Industrial Art (a group consisting of manufacturers and designers of commodities) that the year's exhibition should feature architects' designs for rooms and their contents. With the committee's approval and the commitment from its manufacturer-members to produce architect-designed commodities at no cost, Bach and Solon enlisted the architects Ely Jacques Kahn, Eliel Saarinen, Raymond Hood, John Root, Joseph Urban, Ralph Walker, and the designer Eugene Schoen and entitled the exhibition "The Architect and the Industrial Arts."[118]

As in the Art-in-Trade exhibition co-hosted by the Museum and Macy's Department Store, the spaces exhibited in the 1929 show were, with one exception, intended as rooms within urban office towers and apartment buildings.[119] Stylistically, the interiors demonstrated the persistence of Art Deco motifs (figs. 5.39-41). Iconographic elements prominent at the 1925 Paris fair were also repeated as in Ralph Walker's stylized fountain (fig. 5.42). Within the catalog prepared by Bach, a familiar rhetoric appeared as well, justifying the aesthetic novelty of modern design as a means of varying industrially produced objects and broadening the realm of choice available to consumers.[120]

Bach also explained in the catalog that a unique and important feature of the exhibition had been the provision which allowed the participants to develop the programmatic scenario for the spaces they would design.[121] In pairing visual novelty with the social models envisioned by the architect-designers in the course of defining the usage of each space, the exhibition offered an example of the evolving methodology of modern design which celebrated industrial utopia through aesthetic newness, on the one hand, and defined modes of behavior consistent with the emerging

[118] See the catalog, Metropolitan Museum of Art, The Architect and the Industrial Arts: An Exhibition of Contemporary American Design, New York, February 12-March 24, 1929 (New York, 1929). Illustrations from the catalog also appeared in the article, "The Macy Exposition of Art in Industry," AR 64 (May 1928).

[119] The exception was Ralph Walker who proposed a "Man's Study for a Country House."

[120] Metropolitan Museum of Art, Architect and the Industrial Arts, p. 28-9.

[121] Ibid., p. 16.

commodity culture, on the other. For example, in the spaces depicting domestic scenes, images of leisured lifestyles abounded -- as in the "Woman's Bedroom" and "Man's Study" -- that reaffirmed the associations between modern commodities, social status, and the promise of liberation from work contained within the ideology of mass-production. These endorsements of industrial utopia also infused the few spaces identified for work activities included in the show. Raymond Hood's choice of a "Business Executive's Office" did not merely draw upon his background as a designer of tall office buildings (fig. 5.43). It also lent visual praise to managerial work: having turned the "Businessman's desk" toward a wall map depicting the eastern United States, Hood provided a reference to the national scope of modern industrial production and its distribution networks. Consciously positioned to frame the executive from the view of incoming visitors, even the window called to mind the office tower -- produced by and for industrial management -- in which this room was located.[122]

Hood's "Office" revealed another symbolic component of the 'ensembles' designed for the 1929 exhibition. Rather than merely documenting the environment of managerial activities, the "Office" made an appeal to its audience: its chair conspicuously empty, it implored viewers to transport themselves mentally into this private domain. This motif of enticement is also evident in Walker's "Study", Root's "Bedroom", Urban's "Conservatory", and Kahn's "Bath and Dressing Room" in which nightgown and slippers awaited their owner. These appeals to fantasy were reinforced by the predominantly private activities which the scenes depicted: the rooms were designed to serve individuals in retreat, segregated by age and gender as in the "Child's Nursery and Bedroom" and the "Man's Study" (fig. 5.44). This iconography is also evident in Eugene Schoen's "Child's Bedroom" which was designed to "encourage self-reliance in the child" with adjustable lighting, slotted receptacles for toys "which inculcated orderliness" and a self-pressing clothes compartment.[123]

The preoccupation with private activities suggests another category of affiliation between modern design and the strategies of advertising. As Stuart Ewen has shown, the privatization of

---

[122] Ibid., p. 73.
[123] Ibid., p. 54.

336

domestic activities was a characteristic motif of modern advertising: as part of its program to

substitute industrially produced commodities for traditional craft products, advertising fetishized

privacy as a rebuke of 'traditional' social patterns, and the communal work activities that rendered

them self-sufficient.[124] Similarly, by ornamentalizing private and non-communal activities, these

rooms canonized the modes of behavior acceptable within a commodity culture. Among the

exhibits, only Eliel Saarinen's "Dining Room" suggested a collective domestic function (fig. 5.45).

And, it is revealing that in contrast to the aggressive anti-traditionalism evident in the writings of

the other participants, only Saarinen referred 'modern' artists to the works of the past for

inspiration.[125]

This program of substitution of industrial commodities for the products of self-sustaining

'traditional' culture demanded a new iconography of industrial utopia which demonstrated the

totalizing capacity of industrial technology: industry did not merely augment traditional lifestyles

and release them from their dependence on natural resources and environment. It substituted

itself for both nature and traditional culture, defining the social models of work and leisure as well

as replacing the natural domain as source of sustenance. This iconography is evident in the work

of architects who chose to exploit new industrially produced materials such as aluminum and

'Fabrikoid' (a plastic based product developed by the Dupont Company), and to proclaim their

superiority over natural materials. "Glazed materials such as cadmium-plated steel and highly

glazed tile and mosaics made possible by modern techniques," Joseph Urban wrote,

> ...have been used to augment the effect of the flowers through shadowy
> reflections.... Permanent, highly reflective finishes for metal and tile, requiring no
> polishing after they are installed are recent developments of modern technique.
> Such finishes protect the surface and afford the beauty of waxed marbles and
> polished metals without hand labor formerly necessary to keep them in
> condition.[126]

In their capacity to match the appearance of natural materials without requiring laborious

maintenance, these substitutes depicted the potential of modern industry to outperform nature (fig.

5.46). In describing his "Business Executive's Office," Hood wrote that, "The furniture is made of

---

[124] Ewen.

[125] Metropolitan Museum of Art, Architect and the Industrial Arts, p. 58.

[126] Ibid., p. 40.

aluminum, a material as strong, light and adaptable for the purpose as wood, but one that is not subject to shrinking, swelling, warping, and the necessity of repeated refinishing."[127] Industry even replaced the salutary effects of the sun in the Eugene Schoen's "Child's Nursery and Bedroom" in which "reflectors simulate sunlight."[128]

Modern design extended the totalizing motif of industrial utopia by proclaiming the ability of the modern designer to apply industrial technology and its products to the task of facilitating modern lifestyles. "The task of the contemporary designer," Raymond Hood explained in the exhibition catalog of 1929, "is first to search for the practical solution to his problem, and then to avail himself of every material, every intention, every method that will aid him in its development."[129] A powerful rhetoric of utility thus emerged which proposed that the product of the modern designer -- like the products of industry themselves -- served to procure convenience and health and to intensify leisure time. As Hood concluded, "The office might not be so beautiful, but it would certainly be more convenient, more comfortable and better suited to its purpose."[130]

Architecture as Mass Culture: the Setback Skyscraper

In organizing the Metropolitan Museum show of 1929, Richard Bach made an important gesture to the architectural profession by conveying to it the authority for the development of modern design. Writing in the Architectural Forum shortly after the show's opening, Shepard Vogelsgang demonstrated his awareness of its service to the profession.

> By calling in seven architects to provide backgrounds for furnishings, either designed by them or selected under their supervision, the Museum has gone farther in establishing a sort of leadership for the architect.[131]

Bach's homage to architects was not inadvertent. Rather, it followed a series of public statements he made prior to 1929 which demonstrate his growing conviction that architecture best conveyed the necessity of a modern vocabulary of design attuned to the devices of mass-production

[127] Ibid., p. 74.

[128] Ibid., p. 54.

[129] Ibid., p. 71.

[130] Ibid., p. 72.

[131] Shepard Vogelsgang, "The Museum and the Architect," AF 50 (April 1929): p. 591.

and keyed to the conditions of marketing. In 1927, the AIA invited Bach to speak at its convention on the relationship between the industrial designer and the architect and in the following year, he produced a series of articles for the AIA Journal on the "industrial arts" which outlined his position to the profession at large.[132] Following his earlier arguments, Bach described the necessity of a new direction in the design of consumer products. Although he argued that designers were vital components of "machinery production" (he equated industrial designers with "belts harnessing motive power") he still concluded that they did not fully control the direction of their work: they were forced to take their cues from the market place and were confined by the limits of industrial technique. The architect, on the other hand, designed the environments into which these products would be placed, selected those products and, therefore, set the aesthetic agenda for modern commodities. The architect's "power to influence public taste" was, Bach concluded, "prodigious."[133] Thus, he envisioned architecture as a medium of public persuasion and as a component of mass-culture.

That the interest in modern design was widespread among professional architects throughout the 1920s is demonstrated by the institutional support which it received. Even before the 1925 Paris exposition, Charles Whitaker reported that the Architectural League of New York (which Charles Richards had identified along with the Metropolitan Museum as an organization

---

[132] The invitation came under unusual circumstances. Under the direction of their newly elected president, the traditionalist Milton Medary of Philadelphia, the AIA had chosen as its convention theme, "Architecture and the Allied Arts." The selection was purposeful and followed from Medary's decision to shift the principal focus of the AIA from its "structural service work" to a public reappraisal of "architecture as a fine art." Medary keyed his policy to the recent and dramatic funding by the Federal government of the Public Building Act which committed over $50,000,000 to the construction for buildings for governmental activities including the development of the Federal Triangle in Washington DC. The proposal enabled the Federal Architect to employ private practitioners. The promise of work in the capital renewed the vigor of proponents within the AIA for monumental classicism and for a collaboration between architects and artisans capable of producing appropriate embellishments. There is some irony in the invitation to Bach, who as head of the Metropolitan Museum's industrial arts section, directed its programs in modern decorative arts. Bach's advocacy of industrial production was thus at odds with Medary's vision of a revival of architecture embellished with traditional decoration.

The articles by Bach which followed were published in installments in AIAJ throughout 1928. They were: "Our Industrial Art: Random Reflections on the State of Design," AIAJ 16 (February 1928): pp. 53-9; "Our Industrial Art: Manufacture and Mechano-facture," AIAJ 16 (April 1928): pp. 143-4; "Our Industrial Art: Manufacture and Mechano-facture, Conclusion," AIAJ 16 (May 1928): pp. 185-8; "Our Industrial Art: Design in the Market Place," AIAJ 16 (June 1928): pp. 214-6; "Our Industrial Art: The Emerging Designer," AIAJ 16 (August 1928): pp. 316-7; "Our Industrial Art: Source Material and Research," AIAJ 16 (October 1928): pp.383-8; "Our Industrial Art: Anonyms," AIAJ 16 (November 1928): pp. 419-20.

[133] Bach, "Our Industrial Art: Random Reflections on the State of Design," p. 59.

capable of proselytizing modern design) had disclosed plans to initiate a school of industrial design, "less as applied to the making of individual things and more to production and quantity."[134] As we have noted, following shortly on the heels of the Metropolitan exhibition of furnishings and interiors from the Paris exposition, the League presented its own show of work from the fair in 1926. The League sponsored other shows in subsequent years under the title of "Architecture and the Allied Arts" which featured work of modern European designers. In 1927, the League show included projects by European architects and designers assembled by Raymond Hood. Demonstrating a premonition for European events and an interest in disseminating modern design motifs which would later be popularized by the Paris exposition, the AIA Journal featured the work of Josef Hoffman by Peter Behrens in 1924. Intrigued by the novel decorative approach of the Swedish architect Ragnar Ostberg, whose work was praised for its appeal and unorthodox imagery, AIA members elected him a corresponding member in 1927 and would later give him the Institute's gold Medal in 1933 (fig. 5.47).[135]

But not all members of the professional establishment embraced modern design in the second half of the 1920s. Milton Medary, the newly elected president of the AIA in 1927, openly denounced the aspiration for a "new American" art and architecture because it violated the historical logic that new styles evolve gradually out of existing conventions rather than abruptly in revolt against tradition.[136] The architect and critic, Frederick Ackerman, was more explicit in his condemnation of a "modern movement" which allied itself with an emerging commodity culture.

> In its infancy the movement was assigned the problem of providing not only a revolutionary art expression, in response to the promptings of a revolutionary attitude toward a nauseating dose of the traditional, but one which would meet the specifications of a businesslike concept of what is sufficiently dramatic and startling in effect to be launched as a brand new fashion...
> The craftsman, the artist, the architect has at last come abreast of his time and is expressing the dominant quality of the culture that supports him. He has entered into a union with advertising.[137]

---

[134] See AIAJ 7 (February 1919): p. 49.

[135] Peter Behrens, "The Work of Josef Hoffman," AIAJ 12 (October 1924): pp. 421ff; "The Achievements of Ragnar Ostberg," AIAJ 15 (June 1927): pp. 192-205.

[136] "The President's Address," AIAJ 15 (June 1927): pp. 222-25.

[137] Frederick Ackerman, "The Modern Movement," AIAJ 16 (December 1928): p. 465.

These diverging responses demonstrate the competing interests operating within the profession in the second half of the 1920s. Medary, a traditionalist, was determined as AIA President to redirect the organization to the celebration of architecture as a "fine art." The "modern," popular, unorthodox imagery associated with the Art Deco was neither well suited to Medary's temperament nor to his agenda as Institute President: in 1926, the AIA developed a new lobby effort in response to the passage of the Public Building Act which dedicated over $50,000,000 to the development of federal projects in Washington DC and around the country. Committed to the task of procuring work opportunities for architects which might arise as a consequence of this program, Medary demonstrated a keen awareness of the stylistic priorities of, among others, Andrew Mellon, Secretary of the Treasury, who advocated monumental classicism.[138] Similarly opposed to 'modern design' and its espousal of an 'industrial utopia,' Ackerman demonstrated instead a commitment to publicly subsidized housing in which the concerns of the marketplace were deemed irrelevant.

In contrast to the positions taken by Medary and Ackerman, architects advocating "modern architecture" of the sort criticized by Ackerman found inspiration in the exhibitions such as those sponsored by the Metropolitan Museum and the Architectural League. These were, by and large, professionals whose practices were dominated by commercial work and who were intellectually willing and professionally committed to the interests of industrial managers. As we have seen in the critical writings endorsing the design of the Radiator Building, architects such as Harvey Corbett or Raymond Hood were predisposed to the 'commercial' demands of industry and were willing to place architectural design in its service.[139] Noting the relationship between modern design and this special branch of architectural work, E.A. Park wrote, "Our modern architecture is frankly commercial."[140]

---

[138] See Louis Simon, "Development of Proposed Federal Building Group at Washington," AIAJ 16 (February 1928): pp. 61-62; and Andrew Mellon, "Developing the Nation's Capital," AIAJ 16 (December 1928): p. 449-53.

[139] These architects would later be influential spokesmen for the modern movement and critics of Beaux-Arts classicism. See, for example, the AIA Symposium on "Contemporary Architecture," May 21-3, 1930, minutes distributed by the AIA Committee on Education.

[140] Park, New Backgrounds," p. 143.

The unique compatibility between the symbolic potential of commercial architecture and the ideological agenda of industrial utopians was demonstrated by the setback skyscraper. Ralph Walker, one of the premier highrise architects in New York City hinted at the relationship between the marketing of commodities and the development of an iconography for the highrise.

> At present, it is the skyscraper that is pointing the way, that is showing the possibilities of creating a style more nearly expressive of our time, and this is reasonable for not only is architecture an art practiced in the market place, but also it is from the market places of the world that a fresh impulse to architecture has always come.[141]

As we have seen in the case of the Titan City exhibit sponsored by the Wanamaker Department Store, the selection of the setback skyscraper as an icon of a new industrial era was logical and fit well with an advertising agenda bent on overcoming the resistance to modern commodity culture posed by self-sustaining traditional lifestyles. Technically sophisticated and produced by modern production and managerial methods, the skyscraper posited itself as one of the numerous products of industry. As we have previously noted, within the literature of modernism there were frequent references equating the skyscraper with other new and technologically sophisticated industrial products such as the radio, automobile, and airplane.[142] This affiliation legitimized the conflation of 'modern' architectural design and 'modern' industrial design which appeared in the arguments of those seeking a modern style such as Richard Bach. The skyscraper and its coterie of modern technological marvels also performed an important service to the ideological program of industrial utopia by romanticizing the dramatic cultural changes it foretold in images depicting the novelty and variety of lifestyles forged by new products of industry.[143]

Architects openly participated in the development of the unique iconography of the setback skyscraper. In 1928, Harvey Wiley Corbett's rendering of a "Vision of the City of the Future" appeared in the New York Times together with an article in which he described the

---

[141] Ralph Walker, "New York Telephone Building," PP (November 1927) reprinted in Walker, Ralph Walker, Architect (New York, 1957), p. 21.

[142] Cheney, Art and the Machine, p. 16.

[143] Park, New Backgrounds, pp. 134-5.

modern skyscraper as "America's Greatest Gift to Architecture" (fig. 5.48).[144] In the article,

Corbett celebrated both the technology which facilitated the construction of the tall building and

the managerial logic that informed zoning and which produced its most tangible result, the setback

configuration. Echoing Walker's claim that the inspiration for modern architecture resided in the

skyscraper, Corbett noted that the conditioning factors of technology and modern urban

management -- though mechanical and automatic -- had produced a thing of beauty. Thus, the

skyscraper symbolized the capacity of industrial culture to express itself artistically and posed

resistance to the criticism of the regimentation of modern lifestyles. Moreover, Corbett's

juxtaposition of a verbal description of the evolution of the skyscraper and the graphic image of "A

City of the Future" implicated the building type in the processes of social transformation present in

contemporary culture: composed of towers zoned vertically for retail, office and residential use, the

future city was entirely devoted to industrial management and leisurely consumption. As a

component of this urban vision, the skyscraper demonstrated the irremediable advent of industrial

utopia.

In a poignant criticism of Corbett's work, Lewis Mumford described how this imagery

constituted a fragmentary utopia which denied its insidious implications. The iconography of the

setback skyscraper concealed the reality of the densely compacted urban form that highrise

construction had produced and ignored the fact that tall towers only occasionally pierced the

skyline.[145] The persistence of this denial was evident in the frequent renderings of towers which

appeared in the popular press: over an aerial photo which clearly demonstrated the fragmented

and non-hierarchical form of the commercial city, the headlines of the Chicago Tribune Real

Estate section declared that the presence of these buildings had made this a "Tower Town" thus

declaring -- even in the face of visual proof to the contrary -- that the skyscraper was an urban

form-giver (fig. 5.49). The calculated denial of the urban condition was evident even in the

renderings of shorter, less ambitious highrise office and 'loft' buildings, portrayed in isolation, their

setbacks promising a liberation of their forms from the urban fabric (fig. 5.50). When finally

---

[144] Harvey Wiley Corbett, "America's Great Gift to Architecture," NYT, 18 March 1928, pp. 4-5.
[145] Lewis Mumford, "Climax," AIAJ 13 (December 1925): pp.454-5.

completed, however, the visual reality of these stumpy relatives to the towers of 'Titan City' would reveal -- like the ill-fated Metropolitan Life Building by Corbett which was completed only to its intermediate setbacks -- the absence of needle-like terminations (fig. 5.51).

As we have noted in the previous chapter, the iconography of the setback skyscraper was not limited to its association with an urban vision. Proponents of the skyscraper such as Claude Bragdon cultivated the idea that the tall-office building both symbolized and facilitated the integration of industrial management.[146] For the industrial designer, Norman Bel Geddes, the spatial concentration demonstrated by the skyscraper was merely an outward manifestation of the intense concentration of American life at the hands of industrial managers. "The architectural concentration just described might be looked upon as a symbol of similar developments in all phases of life."[147] Thus, the size of the skyscraper -- its height and bulk -- was itself an important component of its iconography.

A visual expression of the containment of volume in urban highrises was fortuitously served by the interpretive models which architects applied to zoning ordinances requiring setbacks: as Harvey Corbett had shown in his work with Hugh Ferriss in the early 20s, setback formulas defined what were called "envelopes" of space that determined the maximum limits on building volume. In tracing the limits of this spatial volume, architects produced a formal language which itself symbolized the concentration of modern life in buildings of immense size (figs. 5.52, 53). Popularizers of the skyscraper form conventionalized this iconography. Paul Frankl, the designer of "skyscraper furniture," insisted that both his bookshelves and the towers they resembled should be treated as volumes, their "architectural" effect reduced to the interplay of light and shadow on the cubic forms generated by the setback formula of the zoning ordinance (figs. 5.54, 55a, b).[148] Hugh Ferriss' rendering of the Shelton Hotel used by the trade association of steel contractors in its advertising demonstrates his advocacy of the simplification of volumes in such buildings (fig. 5.56).

---

[146] Bragdon, The Frozen Fountain (New York, 1932), pp. 26-34.

[147] Bel Geddes, Horizons, p. 288.

[148] Frankl, New Dimensions, p. 55.

The geometricized ornament characteristic of the Art Deco also aided in the effective communication of this particular aspect of skyscraper iconography. Ely Jacques Kahn, renowned for his modern ornamentalism, applied decorative patterns that recalled a textile motif in their interwoven verticals and horizontals and drew on the atechtonic interpretation of the curtain wall as a shroud enclosing the rigid frame. In their taut, two dimensional character which decorated but did not obscure the building volume, his designs for ornament also recalled the skyscraper iconography that associated the setback highrise with the consolidation of industrial management. In his Park Avenue Building, Kahn massed the building straightforwardly and applied geometric patterns to the surface (figs. 5.57-59). The characteristics of this decorative approach were, as Kahn's contemporary, Parker Morse Hooper explained, a "breadth and simplicity of treatment."[149] Responding to this condition of ornamentation, Sheldon Cheney described it as having produced a "stripped architecture" (fig. 5.60). Cheney's accompanying illustrations suggested that he had not intended to suggest that this architectural treatment revealed a constructional fabric. Instead, ornamental minimalism revealed the pyramidal form of the setback ordinance.

Rather than conveying information about an actual or imaginary constructional system as traditional architectural vocabularies had done, Kahn's ornamental program allegorized the 'machine age' in much the same way as had the motifs popularized by the Paris exposition of 1925. Simple geometric forms and repetitive elements recalled the mechanical processes of industrial production and produced a visual newness consistent with the novelty of the setback skyscraper itself. The exploitation of the Park Avenue Building's "Mammoth" visual presence by the electric utility company, New York Edison, offered evidence of the effectiveness with which Kahn invoked this ornamental language to convey the skyscraper iconography. In its advertising campaign the company drew parallels between the necessity to modern business practices of both "modern American architecture" -- which housed the massive industrial bureaucracy -- and electric power which ran the building's vital machinery and facilitated that bureaucracy's operation (fig. 5.61).

---

[149] Parker Morse Hooper, "Modern Architectural Decoration," AF 48 (February 1928): p. 153.

Further sustaining the setback skyscraper's vivid symbolism as a facilitator of managerial

efficiency were the events of construction which visually testified to the administrative complexity

of urban high rise construction. The methods of industrial production were visible on a daily basis

on the streets of major urban centers where buildings slowly rose (fig. 5.62).[150] Writing in World's

Work in 1929, H.L. Brock described both the sensation of constant growth and the marvel of

construction activity in the twenties which enlivened this iconography.

> Rome was not built in a day, but New York is rebuilt overnight. Or so it seems to
> us who going about our business and pleasure to look up to see some familiar
> landmark and find in its place a shining new pile, rising in springing terraces like
> a giant stairway to the sky.[151]

Brock not only revealed that urban dwellers were aware of the presence of this construction but

that they perceived it as an industrial process whose success depended on capable management.

Noting the scale of urban highrise construction, Brock expressed surprise that the sites of their

construction and dismantling did not generate more visible waste or require more material than

was apparently delivered or removed from the city.

> ...the marvel is how, amid such crowds and such restless milling about in narrow
> chasms, there can be so much wrecking and building and so little clutter.[152]

Brock mapped out the production process by which carefully scheduled supplies were

coordinated with a work process, itself divided according to sequential activities as in an assembly

line. The form of the emerging building, Brock explained, recorded the success of that process, the

steel frame preceding the concrete, masonry, and exterior cladding by several floors as the building

rose from street level.[153] Thus, the emerging building signaled the efficacy of the building process

and, by extension, of the methodologies of industrial management. "If the job is going well," Brock

explained,

> ...you should not see great reaches above the enclosing walls and if a building
> shows such a gaunt skeleton sticking up fifty or a hundred feet, that is prima facie

---

[150] With the increasing tendencies for winter construction advocated by Hoover as a means of stretching
construction activity out throughout the year, this passion play was visible in every season.

[151] H. L. Brock, "Building to High Heaven," World's Work 58:2 (February 1929): pp. 70.

[152] Ibid.

[153] Ibid., p. 73.

346

evidence that something is wrong.... Whatever the cause, the magic is not working quite right.[154]

The bare steel frame, wrapped at its lower levels by a masonry skin in pursuit, as it were, of the rising cage, epitomized the construction process and advertised the effusiveness of its industrial order. Not surprisingly, the public spectacle of highrise construction as well as its symbolic significance to industrial utopia were celebrated by advocates of modern design such as E.A. Park who included images of buildings under construction in his publication on modern style (fig. 5.63).

Popularizers of the skyscraper iconography further reinforced the image of "magic" power conveyed by the construction process. While viewing Hugh Ferriss' images of Titan City in 1925, for example, Lewis Mumford, identified a recurring motif in his renderings (fig. 5.64).

> Indeed, the toppling pile that [he has] pictured scarcely resembles the creation of any human agency; it is rather a massive extrusion of volcanic origin, like the neighboring Palisades. Such a city...stands for a maximum display of material forces and a minimum of human design.[155]

The depiction of the tower as the residue of an insurmountable force also appeared in the formal vocabulary which architects invoked in the design of the skyscrapers themselves. Ralph Walker's Barclay Vesey building or his later New Jersey Telephone Building formed craggy silhouettes against the sky recalling Ferriss' cliff metaphor (fig. 5.65). References to organic forces of natural growth abound in the ornamental program of buildings such as Walker's (upon seeing Barclay-Vesey's leafy decoration Lewis Mumford noted its resemblance to a "strawberry festival") as well as in the design discourse. John Mead Howells merged these naturalistic metaphors when he suggested that tall buildings should end, "in the same way that a growth of pine trees or a palisade or cliff ends against the sky."[156]

The emphatic verticality in the treatment of American highrises was common before World War I. Vertical striping had been evident in the work of diverse architects, ranging from Louis Sullivan to Cass Gilbert whose Woolworth Building (1910-13) sported pier-like forms rising to their termination at the building 'eave.' In his Bush Terminal Tower (New York, 1916-17),

---

[154] Ibid., p. 74.

[155] Mumford, "Climax," pp. 454-55.

[156] John Mead Howells, "Vertical or Horizontal Design," AF 52 (June 1930): p. 782.

Harvey Wiley Corbett had applied a decorative brick pattern to its blank party walls in order to create an illusion of projecting piers (fig. 5.66). Such vertical striping was carried forward by Bertram Goodhue in his Nebraska State Capital (Lincoln, NE, 1920), Hood and Howell's Chicago Tribune Tower (Chicago, 1922) and Saarinen's second place entry in the Tribune Competition of 1922. In these, the verticals recalled the masonry forms of Gothic architecture by representing massive buttresses rising the full height of the towers.[157]

But, the pretense to Gothic imagery diminished in the late 20s as did the effort to terminate the towers in a horizontal gesture of roof: Corbett's Pennsylvania Power and Light Company of 1927 and Howell's Panhellenic Tower of 1928 as well as the proposal for an office building by Morgan Walls and Clements of Los Angeles (ca. 1929) and the Harold Furgeson Building by Walker and Eisen in Los Angeles (ca. 1929) each bore prominent verticals rising without interruption to their tops (figs. 5.67-70).[158] Instead, a different consensus of opinion about the validity of vertical striping emerged from the design discourse demonstrated, for example, by a collection of articles by prominent commercial architects published in Architectural Forum in 1930. Expressing a rationale similar to that of the other contributors, John Mead Howells explained the three reasons for vertical striping: that they accentuated the vertical members of the steel cage which transfer weight to the ground; that they permitted vertical grouping of windows and resolved the dilemma of the "waffle iron" look of a blank wall pierced by holes; and that they permitted the building to terminate "naturally against the sky" like a tree or a cliff.[159] Following the naturalistic characterization of the skyscraper form, Claude Bragdon elsewhere suggested that such vertical emphasis imparted to the tower the appearance of a "fountain" forced upwards from

<hr>

[157] On the Gothic imagery see for example, H.S. Gillespie, "The Bush Terminal Sales Building," Arch 39 (January 1919): pp. 1-5.

[158] Howells, "Vertical or Horizontal Design," p.782. As we have seen previously, the vertical slit facilitated the placement of windows in the thin exterior "curtain" wall by permitting the shadowy recess to occur without the necessity of setting the window sill back from the outside face of the building. Eugene Clute, Drafting Room Practice (New York, 1928), p.11; Park, New Backgrounds, p. 149.

[159] Howell, "Vertical or Horizontal Design," p. 782.

the city floor and "frozen" in a balanced equilibrium of ascending and descending motion (fig.

5.71).[160] Bragdon described the "formula" of this iconography.

> What formula most perfectly expresses our sense of the life-process? Is it not an ascension and a descension -- in brief -- a fountain: a welling up of a forces from some mysterious source, a faltering of the initial impulse by reason of some counter aspect of that force?[161]

Bragdon's representation of the tower as the remnant of competing forces drew on a diverse imagery. Certainly, the "frozen fountain" depicted the motive force of technology, materialized in the skyscraper form, rising against the counterforce of gravity and other impediments to building tall.[162] Bragdon also openly acknowledged a theosophical iconography representing the force of human creativity set at odds with the natural world. But, as Daniele Baroni has claimed, the fountain imagery, evident earlier in the 1925 fair, depicted a passion play of modern industry, showing the effervescence of industry's productive forces contained and controlled by effective management, symbolized by the setback configuration, which restrained excessive ebullition.[163] Thus, the skyscraper iconography corresponded to the symbolic program of industrial utopia by depicting orderly production. As Bragdon concluded,

> ...it is the business of the architect to dramatize not only a building's purpose and function but also the interplay of forces going on within it and in so doing he will be dramatizing life itself.[164]

The symbolic potential of this iconographic program reached an apex with buildings such as the Empire State Building, completed in less than a year. The Chrysler Tower by William van Alen was also speedily completed. But it was the construction of the building's sun-flecked needle which was most dramatic (fig. 5.72, 73a, b). Fearing competition to the title of the tallest structure in the world by the Manhattan Bank Building under construction at the same time, the Chrysler

---

[160] Howells, "Vertical or Horizontal Design," p.782. As we have seen previously, the vertical slit facilitated the placement of windows in the thin exterior "curtain" wall by permitting the shadowy recess to occur without the necessity of setting the window sill back from the outside face of the building. Eugene Clute, Drafting Room Practice (New York, 1928), p.11; Park, New Backgrounds, p. 149.

[161] Bragdon, Frozen Fountain, pp. 10-12.

[162] As an avid follower of Louis Sullivan, Bragdon's description of mysterious forces pressuring vertical growth also recalls a scenario of the tall office building as the consequence of demand for space, the presence of capital and technological capacity willed to form by the architect.

[163] Daniel Baroni, Grattacieli Architectural Americana tra Mito e Realta 1910-1939 (Milan, 1979).

[164] Bragdon, The Frozen Fountain, pp. 10-12.

Tower's construction team assembled the metal frame of the needle inside the upper floors of the building in order to conceal the building's final height. After completion of the competing tower and with security in the knowledge that the Chrysler Building's height would not be exceeded, the crew raised the needle. From the street, the image of this vertical termination rising mysteriously from the body of the tower was rampant with both the "gushing" metaphors introduced by Bragdon and the "magical" imagery ascribed to the building process.

Among the architects who forged this iconography, Ralph Walker provided several of its most studied examples. We have already discussed the frequency of 'cliff-like' conclusions to his towers as in the Barclay Vesey Building. In their pyramidal massing and vertical emphasis his buildings evoked the image of powerful, rising forces at work beneath their masonry surfaces. Even in his ornament he made explicit reference to the fountain imagery later spoken of by Bragdon (fig. 5.74). These attributes are apparent in his firm's designs for Irving Trust in New York City, a tower rising from the street and stepping back toward a faceted crown (figs. 5.75-77). Walker fluted the building wall, causing it to resemble both fabric and water jets rising to a crescendo, an image corroborated by the plan whose rounded corners emphasized the tubular quality of a gushing fountain.[165]

Walker's few writings demonstrated his attention to the expression of height in high rise construction and his desire to eliminate horizontal lines in order to avoid any element which gave "a sense of finality" to the form. They also revealed a romantic aspiration to express emotional and psychic freedom in his architecture. Striving to explain this iconography, he rejected formal purity and asserted that buildings should not look finished nor should they contain definite perimeters on their interiors or exteriors. Instead, he maintained, architectural form should permit the imagination to go on to "infinity" in its perception of open space.[166]

The effort which Walker made to resist "finality" in the form of a building sustained an imagery of incompleteness consistent with Bragdon's vision of the skyscraper as the manifestation

---

[165] The presence of chamfered corners in tower-like highrises was evident earlier in the work of Raymond Hood, especially his entry to the Chicago Tribune tower.

[166] Walker, "New York Telephone Building," p. 4, 21.

of a stationary though constant struggle between competing forces. But, this was a symbolism at odds with a building enterprise confined, as Lewis Mumford observed, by the rigid demands of efficiency and profit.[167] Just as the cliff-like imagery of Ferriss' Titan City project portrayed the city of towers as an ineffable and "natural" condition and thus short-circuited any effort to criticize its form as an aberrant product of human reason so too did Walker's symbolism of "freedom" obstruct criticism of the behavioral expectations expressed in conjunction with the skyscraper iconography. As a related example, consider the image of "Home" illustrated in Sheldon Cheney's 1930 publication, New World Architecture. Using the jarring and unconventional image of the skyscraper, an image he portrayed with John Howells' Pan Hellenic Tower in New York City, Cheney depicted the overtaking of the "past and its slaves" by an unprecedented and "modern" aesthetic formula (fig. 5.78).[168] Closely following this image, Cheney illustrated an interior by Ely Jacques Kahn which, as with his interiors for the Metropolitan Museum show of 1929, resisted association with -- and thus prevented a critical evaluation based on the standards of -- conventional domestic work (fig. 5.79). This imagery of "freedom" concealed the challenges to existing social conventions and traditional lifestyles embodied within the dramatic rendering of modern life carried out in skyscraper surroundings.

Images of the skyscraper "Home" such as that depicted by Cheney prioritized the standards of consumerism. In 1929, advertisements in New York City area papers proclaimed that fashion determined the appeal of "terraces" in high-rise apartments (fig. 5.80). The graphic association of these forms with the set-back towers depicted in the background (whose pyramidal massing produced opportunities for terracing) suggests that advertisers believed in the ability of skyscraper iconography to stir public desire. Real estate advertising also demonstrated the affiliation of this iconography with the message of opportunity offered by industrial culture relayed through advertising. In the Master Building, designed by the firm of Harvey Wiley Corbett, it was

---

[167] Mumford describes the consequence of Ferriss' imagery as being the concealment of its man-made character and the consequent interruption of any critical engagement with the urban model out of which it supposedly emerged. Mumford, "Climax," pp. 454-55.

[168] Sheldon Cheney, New World Architecture (New York, 1930), see chapter on "The Past and Its Slaves."

possible to "Live in a Home of Art and Culture," and thus to transcend conventional domesticity (fig. 5.81, 82).[169]

Following the models of lifestyles depicted in these images, urban apartment dwelling itself changed. Reporting on the market for highrise apartments in New York City in the late twenties, a writer in the New York Times declared that,

> There seems to be a growing desire on the part of business executives and certain professional groups to live close to their places of employment and the skyscraper apartment is a structural accommodation to this interest.

This "structural accommodation," the writer observed, was further served by the "residence hotel," a mode of apartment building popularized among real estate developers because its minimal kitchen/pantry excluded it from stiff requirements of the tenement laws. But, as the writer continued, the residential hotel sustained an "artificial" lifestyle with no space or equipment to support complex domestic activities ranging from bread baking to child-rearing. "We are creating an artificial situation," the writer warned, "and a class of people escaping reality."[170]

To encourage participation even in the face of this criticism, real estate advertising called upon the iconography of industrial utopia and invoked the rhetoric of utility proclaiming the building's 'convenience' (fig. 5.83). It also projected a parallel between modern architecture and modern commodities. At the same time, the presumed convenience of modern architecture extended and reinforced the claims made by advertising that industrial commodities improved the lives of their consumers. In a Chicago ad, for example, the value of an apartment, it was suggested, was associated with the equipment it contained (fig. 5.84). The proximity between the setback skyscraper and the commodity culture it celebrated was evident in the showroom by Raymond Hood for the company, Rex Cole, distributor of GE equipment in the New York City area (fig. 5.85). Surmounted by a refrigerator lantern, a beacon equivalent to the gilded top which Hood provided for the Radiator Building years earlier, the building resembled a set-back tower. Noting the parallelism between modern commodities and modern buildings, the Martha and Sheldon

---

[169] The building contained a residential hotel and the Roerich Museum of Art, hence the claim.
[170] Eunice Fuller Barnard, "Towers of Luxury Rise in Manhattan," NYT Magazine, 8 January 1928, pp. 12-14.

Cheney were moved to speculate on the messages conveyed by their association in their 1936 text,

Art and the Machine.

> There is a challenge to the average person to become an adventurer among the
> creative values of his own age, as any shopper or consumer or mere spectator
> may; and to find the marks of a potentially great future out in the mechanical
> refrigerator, the reading lamp, the vacuum cleaner, the comptometer and the
> checkwriter as well as the automobile, the airplane and the skyscraper.[171]

Thus, the skyscraper iconography was incorporated into a network of commodity/symbols which

collectively revealed the "great future" of industrial utopia.

Modern Architecture and the Rhetoric of Utility

The allegories of industrial effusiveness told by the skyscraper iconography constituted

only one phase of the evolution of modern architecture in the United States. As we have already

mentioned, the symbolic demands which industrial utopians placed on modern design varied over

time: the messages conveyed by modern design shifted away from the metaphorical descriptions of

industrial beneficence toward the visualization of the utility of industrial products. This shift had

its corollary in architectural design as well. Determined to show the life-enhancing capacity of the

new architecture, architects gradually developed a rhetoric of utility which expressed the necessity

of modern design and modern architecture to modern lifestyles. By 1928, for example,

Architectural Record published an article by the architect William Lescaze in which he described

architecture as a "tool" of modern living. Industrially produced and related, in essence, to other

products of industry, modern architecture fulfilled the same role as did other modern "machinery,"

facilitating and enhancing life. "The people of today," Lescaze wrote,

> ...want more air, more light, and more convenience in their homes than any
> architecture of the past centuries has given them or is capable of giving
> them....The present day house should be a tool of man, his implement which
> helps him to grow and to live just as efficiently as his telephone, radio, and other
> machines help him to conquer distances.[172]

Lescaze's article revealed a great deal about the role which this rhetoric played.

Accompanying his text were illustrations of a country house composed of flat roofed, cubic

---

[171] Cheney, Art and the Machine, p. 6.

[172] William Lescaze, "The Future American Country House," AR 64 (November 1928): p. 417.

volumes whose structural system relied on wall slabs and columns of reinforced concrete. As his

verbal imagery suggested, the house was designed with no ornamental excess, a condition which

contributed to the chaste aesthetic appropriate to the utilitarian character of a 'machine' or 'tool

(figs. 5.86, 87). But programmatically, the house was not as austere. It included servants' areas

and a plethora of modern commodities such as an elevator, airplane, and automobiles. Lescaze's

language and visual imagery produced a new commodity aesthetic which encouraged consumption

by proclaiming the utility of new products to modern life. He concluded that,

> The architect must provide for an elaborate apparatus of conveniences and
> diversions, he must use new modes of construction and appointments and
> arrangements that meet the new needs and in doing so express the life and spirit
> of the day.[173]

Raymond Hood also delivered his interpretation of modern architecture in the late

twenties in the pages of prominent professional publications. An article by Hood entitled, "The

Spirit of Modern Art" which appeared in Architectural Forum in November of 1929 conveyed a

pragmatism consistent with the post-depression milieu. "Today utility leads the way, and although

the result may not always send emotional shivers of beauty up the spine, it offers a good substitute

in that it satisfies the intellect."[174] Hood's comments were also consistent with his architectural

work prior to 1929. In his Daily News Building completed in that year, Hood aspired to a design

process which "guided itself" according to the most practical configurations of office space (fig.

5.88). Thus, he portrayed the architectural design process as one of selecting the most expedient

configuration of parts according to the factors of cost and use. "[I]n designing the News Building,"

Hood wrote, "the first and almost dominant consideration was utility."[175]

As important as the formulation of this new rhetorical program for architectural design

may have been to the evolution of an American modern movement, of equal consequence was its

willful manipulation by institutional and corporate patrons of modern architects. The building

campaign of the American Telephone and Telegraph Company, patrons of Ralph Walker in New

York and prominent architects throughout the United States, offers an example (fig. 5.89-91).

[173] Ibid.

[174] Raymond Hood, "The Spirit of Modern Art," AF 51 (November 1929): pp. 445-6.

[175] Raymond Hood, "The News Building," AF 53 (November 1930): pp. 531-2.

Beginning with the powerful imagery of New York Bell Telephone's office tower, the Barclay

Vesey Building, the corporation distinguished itself as a national organization with an extensive

and coordinated building program that emphasized a modern iconography especially for its urban

headquarters. The association is understandable given both the novelty of telecommunications as

well as the corporation's unique managerial structure which placed great emphasis on regional

leadership to encourage the proliferation of the company's propriety technology: the Bell System

based its efforts to expand into new territories and monopolize the telecommunications industry

throughout the country on its claims of the greater efficiency of a coordinated system. These

claims benefited from a cogent corporate image relayed to the public through its architecture.[176]

In 1930, the Bell System published a compendium of its recent building in which it

advertised the corporate architectural policy. The report stated:

> In their design and construction these buildings reflect the policies of the Bell
> System. They are planned to provide at reasonable cost for present service needs
> and for the continuing growth of telephone use. Modern in conception, they also
> reflect in their substantial character and careful planning something of the
> system's stability and its regard for the comfort and convenience of its customer
> and its employees.[177]

Thus, the Bell System's corporate architecture was intended to symbolize the convenience, cost

efficiency, durability and technological advancement which would accrue to the public that

submitted to the company's expansionist policies. On the one hand, the application of architectural

design that was "modern in conception" to the task of overcoming what George Smith has called

the "cultural resistance" against Bell's expansion demonstrated the belief within the corporate

leadership that architecture could function as a mechanism for transforming the consciousness of

its audience.[178] On the other hand, Bell's architectural program demonstrated the breadth of

dispersion of the iconography of modern design and the proliferation of the rhetoric of utility of

1930.

---

[176] As Kevin Lipartito has shown of the Bell System's forays in the south in the first decades of the twentieth century, the resistance to the network's expansion were both technological and cultural, the result of both the corporate insistence on high system standards and the reluctance of local businesses to forfeit autonomy to a large corporate entity. See Kenneth Lipartito, The Bell System and Regional Business (Baltimore, 1989). See also George David Smith, review of The Bell System and Regional Business by Lipartito, In American Historical Review 96 (April 1991): pp. 612-3.

[177] American Telephone and Telegraph, Telephone Buildings: Bell System (New York, 1930).

[178] Smith, review of The Bell System and Regional Business, pp. 612-3.

Defining the Modernist Ideology

Architects elaborated and codified the iconography of modernism, endorsing imagery which sustained the ideology of mass production throughout the late twenties. As we have seen, Raymond Hood's advocacy of modern architecture recalled the rhetoric of industrial democracy, emphasizing that the purpose of the designer was to produce objects and environments which added convenience to the life of its users. Writing on "modern" art and architecture, Hood stated, "We try to be honest and give a man, his ideas and his money an even break."[179] Pursuing the motif of freedom which recurred throughout the twenties, Hood argued that modern architecture guided by "utility" gave men "what they wanted." Nor did Hood fail to mention the antagonism of modern design for things traditional. Modern art was about "debunking" traditions. Thus, Hood acknowledged the role which modern design could play in disrupting the continuum of traditional lifestyles that did not accommodate the products provided by industry.

In response to what appeared to be a growing sentiment in favor of a more explicit definition of modern architecture, the AIA sponsored a symposium on "Contemporary Architecture" in 1930 chaired by Louis La Beaume. La Beaume's introductory remarks demonstrated that many professionals perceived the advocates of modern architecture to be progressive-minded practitioners who challenged the conventions of "Beauty" established by academic eclecticism. The arguments for and against a modern architecture, LaBeaume surmised, pitted "Beauty against Logic." The advocates of conservatism who spoke in favor of the methods of academic eclecticism, John Galen Howard and C. Howard Walker, argued that the "languages" of architectural styles established in the past were still viable and usable in the present. Walker severely criticized the position of architects such as Hood who placed "utility" above "Beauty" for their dismantling of existing conventions of taste without provision for their substitution. Thus, he sought to undercut those advocates of modern design who claimed that architecture should serve and facilitate modern lifestyles. Walker focused in on what he regarded as the aesthetic crisis presented by modern design that rejected the accepted norms of "beauty." But, in focusing on form

---

[179] Hood, "The Spirit of Modern Art," pp. 445-8.

rather than its intended iconography, his critique failed, as did most of the criticism of modern

architecture presented in the symposium, to address the modernist ideology and its allegiance to

the coercive agenda of industrial utopia. Everett Meeks came much closer to the point when, as a

supporter of modern architecture, he observed a troubling emphasis on "newness" and on the

"machine" in the argumentation raised on its behalf. In Meek's mind, the insistence on these

associations had obscured the real goal of any architectural design methodology which was to

uncover the tectonic principles of constructional methods and to express these in form.[180]

Yet, despite Meeks' warnings, advocates of modern architecture such as George Howe

staunchly supported the notion that architecture should be "useful." Howe's address was filled with

the same language that we find in Hood's earlier article: modern architecture, Howe argued,

offered freedom from the constraints of aesthetic traditions and permitted architectural form to

respond to the activities of modern life. Although not nearly so ardent a functionalist, Ralph

Walker also defended modern architecture on the grounds that it corresponded to contemporary

social patterns. He suggested that this new design methodology had emerged from the work of

architects engaged in designing buildings for industry and office space -- buildings that were built

quickly, cheaply and in which architects guided their design process by the goal of providing space

which did not encumber the activities that took place there. Echoing statements he had made in

his earlier writings, Howard Walker noted that the character of this unobtrusive and useful

architecture was best expressed in forms which "lacked" a sense of enclosure.[181]

Ralph Walker went on to describe his rationale for this iconography of freedom in an

article he prepared with his partner, Stephen Voorhees, for a compendium compiled by Charles

Beard in 1930. Noting that it was now more common to find women working outside the home

and thus demanding greater freedom from housework, they wrote:

> This has led to a greater study of the housekeeping problem, the introduction of
> labor saving machinery and to specialization, a breaking up of general housework

---

[180] Contemporary Architecture: Report on the Symposium Held at the 63rd Convention of the AIA in Washington DC, May 21-3, 1930, introduction by Louis LaBeaume, distributed by the AIA Committee on Education. Participants included John Galen Howard, C. Howard Walker, Everett Meeks, George Howe and Ralph Walker.
[181] Ibid., pp. 7, 18.

357

and, in turn, has given the women the greater freedom that they desire and for which they are trained.[182]

This, they argued, changed the requirements placed on architecture and had already begun to influence housing. Moreover, Walker and Voorhees continued, modern design resolved the dilemmas of standardization by introducing variety in the forms of commodities and buildings, extending the field of choice of the consumer.[183] Thus, Walker invoked the iconography of "freedom" in both its senses -- as the facilitation of modern life and as the provision of a wider field of choice in which the consumer could express his or her desires.

Within their article, Walker and Voorhees embraced the image of industry as a totalizing force which controlled the options for work and enhanced leisure-time. This was no less apparent in their description of modern life as it occurred in American urban environments and thus as it affected the design of the physical form of cities. The greatest change, they noted, "has been in the changing relation of the country and in the loss of its absolute independence -- it is no longer self-sustaining but is now dependent upon the city for its life."[184] Thus the city as the center of production and distribution had come to symbolize for Walker and Voorhees the expanding influence of industrial commodities in American life, leaving no aspect untouched and autonomous.

Modern design, like modern industrial culture itself, aspired to envelop and contain all strata of people and all forms of life, imposing rigorous standards of work and leisure while projecting a "landscape of freedom" curiously at odds with rigor of modern lifestyles. Even architects, Walker observed, were contained by the determinism of this force. He wrote:

> ...while it is true that in the most cramping circumstances, architects enjoy a certain liberty while by experimentation they themselves may help to give new designs to social living and economic production, the degree of their freedom will depend in large measure upon their understanding of the nature and necessities of the civilization in which they are operating and upon their capacity to use all the devices of exploration which it affords.[185]

---

[182] Stephen Voorhees and Ralph Walker, "The Machine and Architecture," in Charles Beard, ed., Toward Civilization (New York, 1930), pp. 220-1.

[183] Contemporary Architecture, p. 18.

[184] Voorhees and Walker, "Machine and Architecture," pp. 216-7.

[185] Ibid., p. 213.

Modern Design at the Century of Progress Exposition, 1933

The iconography of modern design was popularly disseminated in 1933 with the opening

of the Chicago Century of Progress International Exposition (CPIE) for which, as we have noted in

previous chapters, Ralph Walker together with Corbett, Hood, Ely Jacques Kahn, Joseph Urban,

and other architects contributed designs. The fair's imagery, flawed, as Paul Cret noted, because it

was a temporary construction built hastily and in the depths of economic crisis, was nevertheless

compelling because of its staunch commitment to a modern idiom.[186] Moreover, the CPIE

physically manifested that relationship between modern design and the corporate entities whose

cultural agenda it forwarded.

As we have seen, between their initial inception in 1928 and 1933, the fair's site plans

underwent dramatic revision and their evolution and the later designs for pavilions demonstrated

the gradual emergence of new stylistic and iconographic methods at the end of the decade. Having

begun with symmetrical dispositions of buildings, the Architectural Commission finally approved

an asymmetrical configuration conceived by Raymond Hood in 1930 which permitted a loose

grouping of the principal pavilions.[187] The accepted schematic site plan featured a central fountain

to be designed by Ralph Walker as a focal point for the principal entrance to the fairgrounds (fig.

5.92). Walker's proposal for a metal tower, which appeared in publications for the Regional Plan

of New York, featured central slabs surrounded by lower fins resembling the form of a set-back

skyscraper. The association between the tower form and the fountain imagery also tied Walker's

imagery to that of Claude Bragdon and suggested just how firmly entrenched was the imagery of

the "frozen fountain" by 1930.

Equally important, however, was the association between this central gushing image and

the publicity for the fair which advertised its desired association with industry. As the CPIE

literature explained, it had been intended as a celebration of "100 year's progress" in industry and

science and its motto, "Science Finds, Industry Applies, Man Conforms," was an ominous

---

[186] Paul Cret, "Festive Stage Setting," AF 59 (July, 1933): p. 4.

[187] Interspersed with these were small privately sponsored exhibition buildings whose size and location were determined gradually as interested corporate sponsors signed on. On the planning, See for example Walker, Ralph Walker, p. 85.

attribution of modern life to its industrial wellspring.[188] Moreover, the fair sponsors celebrated

the manifestation of industrial progress in the transformations of the social and physical

environment occupied by Americans. The catalog continued:

> Science, patient and painstaking, digs into the ground, reaches up to the stars,
> takes from the water and the air and industry accepts its findings, then fashions
> and weaves and fabricates and manipulates them to the uses of man. Man uses
> and it affects his environment, changes his whole habit of thought and of living.
> Individuals, groups, entire races of men fall into step with the slow or swift
> movement of the march of science and industry.

A desire to celebrate scientific discovery and technological rationality leading to life-

enhancing -- and life-transforming -- industrial products was expressed by the fair designers as well

as its organizers. In his earliest correspondence with the organizing committee, Raymond Hood

spoke of a new method of displaying industrial products to emphasize their immediate impact on

average Americans. "The cross section of a Fair has always been an industrial one." Hood stated in

a letter to Allen Albert of the CPIE Board of Directors. "That is to say, the elements making it up

were the big industries, such as electricity, agriculture, transportation, and so on." Would it be

possible in the CPIE, Hood asked,

> ...to imagine a cross section taken not through what you might call the working
> interests of a man but through the more human and fundamental interests which
> might be considered as food, shelter, protection, health, clothing and recreation.

He continued, demonstrating a keen awareness of the value of associating industrial commodities

with contemporary lifestyles.

> To make it more concrete, a woman, let us say, who is interested in an electric ice
> chest must be preoccupied at the moment with thoughts of shelter, or the home.
> So that would be the proper environment in which to see the ice chest.[189]

In a sense, the entire fairgrounds fulfilled Hood's agenda by providing an imagery that

recalled the motifs of urban highrises popularized since 1925. So, for example, through its

association with the Bragdonian image of a "frozen fountain," Walker's central monument alluded

to the resurgent forces welling up within industrial culture. Ornamental embellishments to the

pavilions evoked images of the promethean exploits of industry, symbolizing electricity, mechanical

---

[188] Official Guidebook of the Fair (Chicago, 1933), pp. 10-11.

[189] Letter from Raymond Hood to Allen Albert, March 13, 1928, UIC CPIE, folder 5-25.

power leading to new life experiences such as the radio communication (FDR's inauguration of the fair was broadcast from Washington, DC), airplane travel, and photojournalism. Alongside these were exhibited the commodities themselves, from refrigerators to automobiles, whose presence manifested the novel condition of modern life.

The contextualizing role of the fair's architecture was demonstrated with especial clarity in the references to urban highrises present in the automobile pavilions designed for and financed by the companies which they housed. On its exterior, the Chrysler Pavilion by Holabird and Root, one of the most satisfying buildings architecturally, took the form of two large pylons. But from its interior, one witnessed an opening to the sky framed by four corner elements which gave the viewer the impression of being located at an urban street intersection (fig. 5.93, 94). Thus, the cars exhibited on the pavilion floor were projected into a context pregnant with the memory of both real urban environments as well as projections of urban futures. The association of the automobile with a familiar architectural image was a strategy used by General Motors as well. In its serrated form, the GM Pavilion, designed by the Detroit architect, Albert Kahn, recalled the drawings of urban highrises by Hugh Ferriss (fig. 5.95). The activities of the interior were equally extraordinary, featuring a partial assembly line on which it was possible to watch the final production phases of the company's cars. For those visitors with foresight, it was possible to order one of the many General Motors models from a dealer and schedule its delivery to coincide with the trip to the fairgrounds. Once at the fair, GM customers could watch as their car joined the assembly line for its last parts and drive home from the fair.

Hood's suggestion for displays that depicted industrial products in surroundings relevant to the consumer was most effectively carried out in the house exhibits. Originally planned as a 'village,' the final grouping of 'homes' combined the efforts of individual architects, building products manufacturers, prefinished building producers, and a labor association. Thus, the spectrum of advertising agendas was broad (figs. 5.96-104). But, in each case, designers invoked a modern idiom. Descriptive material related to the individual houses was exhibited in a pavilion called, ominously, "Home Planning Hall" designed by Ely Jacques Kahn (fig. 5.105). The fair

organizers chose to place further material on domestic environments into the Hall of Social

Science where displays compared the modern home to those of earlier eras. In addition to a

depiction of the history of changes in lifestyles from the Mayans to the present, the visual history of

the American household began with images of early colonial interiors featuring the activities of

spinning, weaving, making garments by hand and drying fruits and meats.[190] This tableaux

changed, the fair's Guidebook explained, to show frontier and old western households to the visitor

before arriving at a depiction of a family's life in 1933. In this, the final stage, the display depicted

an apartment. In lieu of the activities of traditional households, the viewer now saw an

environment filled with appliances. "There is an inevitable radio and the modern refrigerator while

on the shelf are cans of prepared foods," the Guidebook explained. It continued:

> The screen descends again. This same apartment appears on the map as a part of
> a gigantic building and it in turn is part of a mammoth city and you see its
> amusements places, parks, boulevards, playgrounds, schools and factories. That
> miry road has become a smooth macadam highway. There is a railroad train. An
> airplane flashes across the skies. The daily limit of this family now extends to
> distant cities.[191]

This iconography of freedom and convenience was reiterated in the house pavilions

themselves, each featuring new materials and appliances reputed to save time and money in

fabrication, maintenance, and daily labor (figs. 5.106, 107). Howard Fisher's General Homes, a

corporation modeled after General Motors, offered housing made of cellular, prefinished

components. The planning of these buildings, the company literature maintained, could be

developed by individual families working on grid paper whose divisions followed the proportions of

the prefabricated wall units (figs. 5.108a, b, c, d). StranSteel exhibited a house built of a porcelain

enameled panel which required no maintenance. The 'Florida House' foretold of a comfortable

lifestyle enhanced by an architectural composition in which roof terraces opened for intimate

association with the out-of-doors. One of the most visited of these buildings was George Keck's

"House of Tomorrow." Modeled after 19th century Octagon Houses popularized by Henry Fowler,

its circular arrangement also borrowed from Buckminster Fuller's Dymaxion House.[192] Inside,

---

[190] Official Guidebook, pp. 60-1.

[191] Ibid.

[192] See R. Buckminster Fuller, "A House for Mass Production," AF 51 (July 1929): pp. 103-4.

Keck's building included numerous appliances, furniture covered in durable, stain resistant materials, as well as an automobile and airplane, conjuring an imagery which recalled the descriptive text accompanying the home exhibit in the Hall of Social Sciences.

The buildings of the fair demonstrated the popular ascendence of modern architecture as an iconography of consumer culture. These buildings told of the responsiveness of modern design to the ideological agenda of industrial utopians as well as the specific rise of the rhetoric of utility which would dominate the professional discourse throughout the next two decades in the guise of "functionalism."

Conclusion

In 1932, Americans gave a clear indication of their desire to change their political leadership when they voted to replace the administration of Herbert Hoover with that of Franklin Delano Roosevelt. Yet despite the intensity of public sentiment against Hoover, whose presidency would be marred by the stigma of having appeared inactive and partisan to the wealthy at a moment of deep economic crisis, support remained for the social and political ideologies he had helped to popularize. Although Roosevelt's 'New Deal' would set a new precedent for governmental intervention in the American industrial economy, his proposals to centralize managerial authority borrowed heavily on the model of Hoover's 'Associative State.' Firmly ensconced behind both political strategies was a belief in the controllability of economic and productive functions as well as the efficacy of rational management carried out by technical overseers.

Within the context of this national political milieu, the strains of modernism that had emerged in the architectural discourse in the wake of World War I still appeared vibrant and relevant. Architects continued to discuss their social function in terms of their service to the task of rendering building production more efficient. Their efforts to define their work were couched in terms that suggested a broadly based conviction in the capacity of modern industry to perform as a medium of social progress. Viewing their roles even more broadly, advocates of a modern movement such as George Howe discussed the moral imperatives of attaching architectural work to the vision of the 'New Deal,' committing architects to the same goals of national renewal as were embodied within Roosevelt's oratory.

Keying in to these representations of professional 'service,' ideologists of the 'International Style' such as Kenneth Stowell, the editor of the Architectural Forum in 1931, declared it a style with no fixed aesthetic component but one which derived its form from the logic of production and the "usability" of the architectural products with which it was associated.[1] The rhetoric of 'use,'

---

[1] Kenneth Stowell, "The International Style," AF 56 (March 1931): p. 253.

'utility,' and 'functionalism' invoked by Stowell and others was central to the proliferating American modern movement in the 1930s. Within the context of the professional discourse that evolved through the twenties and thirties, it is clear that this terminology embodied a world view, positivist in nature, based on a belief in the ability of human reason to regulate industry and to make it useful to a mass-audience.

But, the evolution of this modernist ideology was no more detached from the limited desires of professionals eager to preserve the value of their skills and knowledge than it had been in the previous decade. The architects' preoccupation with the 'marketability' of their services was as evident during the 'New Deal' as it had been during Hoover's 'New Era.' At the same time that Stowell was extolling the virtues of pragmatism and disinterested rationality exhibited by the adherents of the International Style, his magazine recorded the minutes of the AIA Convention in the early thirties in which, as the report in 1932 suggests, "The factors underlying the practice of the profession or necessary to its existence and continuance rather than problems of design or construction were considered almost exclusively."[2]

The effort to produce a professional ideology was, however, neither scientific nor entirely successful when viewed from the perspective of the professionals' effort to preserve the value of their 'cultural capital.' One is forced to note the erroneous and contradictory nature of that ideology when considering, for example, that in attempting to achieve a greater relevance for their work, professionals proposed to integrate themselves into a managerial collective, a goal which undermined their efforts to achieve a greater control over their work. Instead, we must conclude that these ideologists were responding to a diverse set of conditions: the success of words and ideas among the profession-at-large was determined both by their efficacy as the medium of defending and extending the collective interests of practitioners and as the source of psychic relief from the strain of having lost the cultural authority architects had achieved in the late nineteenth and early twentieth century. Thus, the ideology of the modern movement could combine both a genuine

---

[2] "The 65th Annual Convention of the American Institute of Architects," AF 56 (June 1932): pp. 25-8.

idealism which perceived the architect's role as being attached to a political program of reform and a pragmatic and entrepreneurial fixation on the market for professional service.

The preeminence of these ideas in the early 1930s provided a fertile terrain for European trends of thought transported here by the 'diaspora' of intellectuals in the mid-1930s. Personified by the work of Mies van der Rohe and Walter Gropius, European modernism also merged a utopian rhetoric with a commitment to pragmatic service. But within the American context, their ideas were transformed, the artistic 'collaboration' advocated by Gropius being usurped by proponents of managerial consolidation and the elegant simplicity exemplified by the work of Mies as license to ignore the aesthetic content of architecture in favor of a formal simplicity prioritized by the quest for rational and inexpensive construction technologies.

As a brief epilogue, it is intriguing to wonder why, when so many aspects of the modernist ideology survived to re-emerge within the professional discourse in the 1930s and again in the 1950s, the personalities associated with the modernist discourse of the 1920s were so quickly forgotten. A partial explanation may be found by observing that although the rhetorical and ideological content of modernism remained intact during the New Deal, the types of buildings and programs which predominated offered opportunities for work that privileged a new professional personality less overtly 'commercial' in its outlook than had been that of architects such as Harvey Corbett or Ely Jacques Kahn. In addition, the period of the depression and the ensuing war caused a reduction in building production that forced most architects out of the historical limelight. By the time World War II had concluded, many of the most prominent practitioners of the 1920s were old or dead and thus unwilling or unable to attempt to reconvene their professional audience.

At least two offices do, however, represent a professional continuity within the American context. Voorhees, Walker, Foley and Smith, the successor firm to McKenzie, Voorhees and Gmelin continued to produce designs which carried its pre-World War II position further especially in its work for the Bell system. Confirming his status among professionals, Ralph Walker was elected "architect of the century" by the AIA in 1957. Whereas Walker represented a generation rooted in the twenties, Louis Skidmore and Nathaniel Owings were members of a new

group of practitioners trained in the 1920s who came to their maturity after World War II. In the large scale of their office and its undertakings, its intensive collaboration, pragmatic outlook and utopian conviction, Skidmore Owings and Merrill consummated the aspirations of the modernists and professionals of the 1920s.

Modernism and Professionalism in American Architecture, 1919-1933

Volume Two of Two

by

Paul Louis Bentel

A.B., Harvard College
1979

M.Arch, Graduate School of Design,
Harvard University,
1982

SUBMITTED TO THE DEPARTMENT OF ARCHITECTURE
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY
IN THE FIELD OF
ARCHITECTURE, ART AND ENVIRONMENTAL STUDIES
AT THE
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
FEBRUARY 1993

Signature of the Author _____

Paul Louis Bentel
Department of Architecture
October 9, 1992

Certified by _____

Stanford Anderson
Professor of History and Architecture
Head, Department of Architecture
Thesis Supervisor

Accepted by _____

Stanford Anderson
Chairman
Departmental Committee on Graduate Studies

Bibliography

Primary Sources Cited:

Abbott, Bernice. Changing New York. New York: 1939.

"The Achievements of Ragnar Ostberg." AIAJ 15 (June 1927): pp. 192-205.

Ackerman, Frederick. "The Significance of England's Program of Building Workmen's Houses." AIAJ 5 (November 1917).

_____. "How Shall We Provide Good Houses for All?" In Southern Pine Association, Houses for Workmen. New Orleans, LA: 1919.

_____. "Where Goes the City Planning Movement." AIAJ 8 (August 1920): p. 285.

_____. "The British Guildsmen and Their Plans." AIAJ 8 (October 1920): pp. 373-76.

_____. "Our Philosophy of Restriction." AIAJ 9 (March 1921): pp. 72-73.

_____. "The Division of Labor." AIAJ 10 (September 1922): pp. 291-94.

_____. "Craftsmen - Machines - Credit - Speed." AIAJ 11 (June 1923): pp. 249-252.

_____. "The Function of Architectural Criticism." AIAJ 16 (April 1928): pp. 144-47.

_____. "The Modern Movement." AIAJ 16 (December 1928): p. 465.

Adams, Frederick. Manual of Office Practice. New York: 1924.

Adams, Henry. The Education of Henry Adams. Boston: 1918.

Adams, Thomas, and Edward Bennett. Regional Survey of New York, v.VI: Buildings, Their Uses and the Spaces About Them. New York: 1931.

Adams, Thomas. The Building of the City. New York: 1931.

_____. Rural Planning and Development. Ottowa: 1917.

_____. "Regional and Town Planning." American City Magazine 21 (July 1919): pp. 4-6.

_____. "Industry, Homes and Architecture." AIAJ 7 (December 1919): pp. 512-18.

_____. "Reserving Productive Areas Within and Around Cities." AIAJ 9 (October 1921): p. 316.

_____. "Forecast: The Regional Commitee of the Future." Paper delivered at A.C.P.I. Philadelphia: October 1926.

_____. "The Making of a City." Creative Art v. 9 #8 (August 1931): pp. 160 ff.

_____. "Communication: In Defense of the Regional Plan." New Republic, 71 (July 6, 1932): pp. 207-10.

"Address of President Thomas Kimball, 53rd Annual Convention of the Institute." AIAJ 8 (June 1920): pp. 220-222.

"American Architecture in England," AIAJ 10 (January 1922): pp. 16-19.

AIA. Contemporary Architecture: Report on the Symposium Held at the 63rd Convention of the AIA in Washington DC, May 21-3, 1930, (Washington, D.C.).

_____. "Cubic Contents of Buildings - Standard Method of Calculation and Form Statement." AIA Document #215: 1926.

_____. Executive Committee Minutes, AIA RG. 510-2,3,4.

_____. The Handbook of Architectural Practice. Washington DC: first printed, 1919.

_____. Report of the Committee on Community Planning to the 58th Annual Convention. Washington, DC: 1925.

American Telephone and Telegraph. Telephone Buildings: Bell System. New York· 1930.

"Architects and Draftsmen." AIAJ 9 (1921): pp. 19-20.

"The AIA Circular of Advice" (AIA Doc. no. 141) issued in 1920.

Aronovici, Carol. The Social Survey. Philadelphia: 1916.

_____. Housing and the Housing Problem. Chicago: 1920.

Atterbury, Grosvenor. "How to Get Low Cost Homes." Proceedings of the Fifth National Conference on Housing. Washington DC: 1916.

Augin, Tracy. "City Planning and Civic Progress." AF 55 (September 1931): pp. 265-72.

Bach, Richard. "The Museum as a Laboratory." Bulletin of the Metropolitan Museum of Art 14 (January 1919): pp. 2-5.

_____. "American Industrial Art." Bulletin of the Metropolitan Museum of Art 19 (January 1924): p. 2-4.

_____. "On the Road to Better Design." Bulletin of the Metropolitan Museum of Art 22 (July 1927): p. 197.

_____. "Our Industrial Art: Random Reflections on the State of Design." AIAJ 16 (February 1928): pp. 53-9.

_____. "Our Industrial Art: Manufacture and Mechano-facture." AIAJ 16 (April 1928): Part I, pp. 143-4; (May 1928): Part II, pp. 185-88.

_____. "Our Industrial Art: Manufacture and Mechano-facture, Conclusion." AIAJ 16 (May 1928): pp. 185-8.

_____. "Our Industrial Art: Design in the Market Place." AIAJ 16, (June 1928): pp. 214-6.

_____. "Our Industrial Art: The Emerging Designer." AIAJ 16 (August 1928): pp. 316-7.

_____. "Our Industrial Art: Source Material and Research." AIAJ 16 (October 1928): pp.383-8.

_____. "Our Industrial Art: Anonyms." AIAJ 16 (November 1928): pp. 419-20.

_____. "Art in the Marketplace." Toward Civilization, Charles Beard, ed. New York: 1930.

_____. "Contemporary American Industrial Art." Bulletin of the Metropolitan Museum of Art 24 (October 1931): pp. 226-8.

Baldwin, George. "The Offices of Albert Kahn, Architect, Detroit, Michigan." AF 29 (November 1918): pp. 125-30.

Baltimore Municipal Journal. "Facts Issued by the City Government." Baltimore: February 10, 1922.

Barber, Donn, and Bertram Goodhue. "American Architecture in England." AIAJ 10 (January 1922): pp. 16-19.

Barnard, Eunice Fuller. "Towers of Luxury Rise in Manhattan." NYT Magazine, 8 January 1928, pp. 12-14.

Bassett, Edward. "The Principles of Zoning." In Zoning as an Element in City Planning and for the Protection of Property Values, Public Safety and Public Health, Lawson Purdy et al. Washington DC: 1920.

_____. "Constitutionality of Zoning in Light of Recent Court Decisions." National Municipal Review, #13, no. 9 (September 1924): pp. 492-97.

_____. "New Court Decisions on Zoning." National Municipal Review, 24, no. 6 (June 1925): pp. 346-49.

Beard, Charles and Mary. America in Midpassage. New York: 1939.

Beard, Charles, ed. Whither Mankind. New York: 1928.

_____. "Some Aspects of Regional Planning." American Political Science Review, XX (May 1926): p. 278.

Behrendt, Walter Curt. Modern Building: The Nature, Problems and Forms. New York: 1937.

_____. "Skyscrapers in Germany." AIAJ 11 (September 1923): p. 368.

Behrens, Peter. "The Work of Josef Hoffman." AIAJ 12 (October 1924): pp. 421ff.

Benjamin, Marsh. An Introduction to City Planning: Democracy's Challenge to the American City. New York: 1909.

"Bertram Grosvenor Goodhue." AIAJ 12 (June 1924): p. 276.

Blackall, C. "American Architecture Since the War." American Architecture, vol. 133, (January 5, 1928): pp. 1-11.

Blake, Clinton. The Architect's Law Manual. New York: 1924.

Board of Overseas Trade (UK). Reports on the Present Position and Tendencies of the Industrial Arts as Indicated at the International Exhibition of Modern Decorative and Industrial Arts, Paris 1925. London: 1927.

Boring, William. "What is Precedent Doing to American Architecture." AIAJ 12 (June 1924): pp. 260-63.

Bossom, Alfred. "50 Year's Progress Toward an American Style in Architecture." AA 129 (January 5, 1926): pp. 43-9.

_____. Building to the Skies: The Romance of the Skyscraper. London: 1934.

Bowman, Irving. "An Industrial Approach to Housing." AF 57 (July 1932): pp. 73-79; (October 1932): pp. 371-80.

Boyd, D.Knickerbocker, ed. Structural Service Book Vol 1: A Revised Reprint from the Twelve Issues for 1917 of the Journal of the American Institute of Architects Structural Service Department. Washington DC: 1918.

_____. "For a Better Cooperation Between Architects, Engineers, the National Government and other Organizations." Arch 39 (February 1919): p. 50.

Boyd, John Taylor. "A Departure in Housing Finance." AR 52 (August 1922): p. 34.

_____. "58th Convention of the AIA." AF 42 (May 1925): pp. 277-82.

_____. "Wall Street Enters the Building Field." AF 50 (May 1929): pp. 769ff; 51 (July 1929): pp. 119ff.; (August 1929): pp. 245ff.

Bragden, Claude. Tapestry Brickwork. Boston: 1909.

_____. The Beautiful Necessity. New York: 1910; reprint 1939.

_____. Projective Ornament. Rochester: 1915.

_____. Architecture and Democracy. New York: 1918.

_____. The Frozen Fountain. New York: 1932.

Bright, John Irwin. "Housing and Community Planning." AIAJ 8 (June 1920): pp. 228-229.

Brock, H. L. "Building to High Heaven." World's Work 58:2 (February 1929): pp. 70.

Brooks, Van Wyck. "America's Coming-of-Age." In Van Wyck Brooks: the Early Years, Claire Sprague, ed. New York: 1968.

Brown, Glenn ed. The Relations of Railways to City Development. Washington DC: 1909.

"Building Code Commission," [ca. 1932]. CPIE, UIC, Chicago, folder 6-15.

"The Building Industry." AIAJ 9 (April 1921): pp. 141-143.

"The Building Industry in the United States." AIAJ 8 (August 1920): pp. 307-10.

Burchard, John. "Materials for Mass-Production." AF 55 (October 1931): pp. 507-14.

Bureau of Industrial Housing and Transportation. Report of the U.S. Housing Corporation. 2 volumes. Washington DC: 1920.

Casteels, Maurice. The New Style: Architectural and Decorative Design: A Survey of the First Phase in Europe and America. New York: 1931.

Century of Progress Exhibition Company. Book of the Fair. Chicago: 1933.

Chamberlain, Samuel. "In Search of Modernism." AA v. 131 (5 January 1927): pp. 71-74.

Chase, Stuart. "Building Trades and Other Trades a National Problem." AIAJ 10 (June 1922): pp. 202-203.

Chase, William Parker. New York 1932: The Wonder City. New York: 1932.

Cheney, Sheldon and Martha. Art and the Machine. New York: 1936.

Cheney, Sheldon. The New World Architecture. New York: 1930.

Chubb, Charles. "The Question of State Societies." AIAJ 8 (May 1920): pp. 187-93.

"Circular on Advertising." The Handbook of Architectural Practice. Washington DC: 1925.

City Club of Philadelphia. "A Regional Plan for the Philadelphia Metropolitan District." In City Club News III (22 November 1924): p.9.

Clark, Lyman. "Architects and Industry." AIAJ 10 (August 1922): p. XIII.

Clark, W.C. and J.L. Kingston. The Skyscraper: A Study in the Economic Height of Modern Office Buildings. New York: 1930.

Clute, Eugene. Drafting Room Practice. New York: 1928.

_____. The Treatment of Interiors. New York: n.d.

Cochran, Edwin. The Cathedral of Commerce. New York: 1917.

Coles, William, ed. Architecture and Society: Selected Essays of Henry van Brunt. Cambridge, MA: 1969.

Committee on the Regional Plan of New York and Its Environs. The Graphic Regional Plan. New York: 1929.

Comstock, William. The Housing Book. New York: 1919.

Condit, Carl. The Chicago School of Architecture. Chicago: 1964.

"A Congress of the Building Industry." AIAJ 8 (September 1920): pp. 340-341.

"The Congress of the Building Industry." AIAJ 9 (April 1921): p. 141.

Corbett, Harvey Wiley. "High Buildings on Narrow Streets." AA 119 (8 June 1921): pp. 603-8, 617-19.

_____. "Influence of Zoning on New York's Skyline." AA v. 123 (3 January 1923): pp. 1-4.

_____. "Zoning and the Envelope of the Building." PP 4 (April 1923): pp. 15-18.

_____. "The American Radiator Building." AR 55 (May 1924): p. 476.

_____. "Different Levels for Foot, Wheel and Rail." American City Magazine, 31 (July 1924): pp. 2-7.

_____. "Effect of New York Zoning Resolution on Commercial Buildings." AA v. 125 (19 November 1924): p. 470.

_____. "The Birth and Development of the Tall Building." AA v. 129 (5 January 1926): pp. 37-40.

_____. "How Zoning Laws Affect the Contours and Rentability." Building Investment and Maintenance 1 (April 1926): pp. 17-19.

_____. "Economic Height of Buildings: The Skyscraper Attacked and Defended." In U.S. Chamber of Commerce, Report of the Annual Meeting. Washington DC: 1927.

_____. "The Problem of Traffic Congestion and a Solution." AF 46 (March 1927): pp. 200-8.

_____. "America's Great Gift to Architecture." NYT, 18 March 1928, pp. 4-5.

_____. "Skyscraper Garages and Congestion." AF 52 (June 1930): pp.825-26.

_____. "The Design of Office Buildings." AF 52 (June 1930): p. 779.

Cormody, John. "The Empire State Building, X: Field Organization and Methods." AF 54 (April 1931): pp. 495-506.

Cortissoz, Royal. Art and Common Sense. New York: 1913.

Cram, Ralph Adams. Impressions of Japanese Architecture and the Allied Arts. Boston: 1906.

_____. The Ruined Abbeys of Great Britain. New York: 1906.

_____. The Gothic Quest. Boston: 1907.

_____. Excalibur. Boston: 1909.

_____. American Country Houses of Today. New York: 1913.

_____. Church Building. Boston: 1914.

_____. The Ministry of Art. Boston: 1914.

_____. Heart of Europe. New York: 1915.

_____. Six Lectures on Architecture. Chicago: 1917.

_____. The Nemesis of Mediocrity. Boston: 1917.

_____. The Substance of the Gothic. Boston: 1917.

_____. The Great Thousand Years. Boston: 1918.

_____. Gold, Frankincense and Myrrh. Boston: 1919.

_____. The Sins of the Fathers. Boston: 1919.

_____. Walled Towns. Boston: 1919.

_____. Towards the Great Peace. Boston: 1922.

_____. "Machines and Men." AIAJ 10 (December 1920): pp. 399-401.

_____. "The Lincoln Memorial, Washington D.C., Henry Bacon, Architect." AR 53 (June 1923): pp. 478-508.

_____. "The Value of Precedent in the Practice of Architecture." AIAJ 12 (June 1924): pp. 263-5.

Crane, T. "Choosing the Structural System and Material." AF 50 (April 1929): p.603-10.

Cret, Paul. "Modern Architecture." The Significance of the Fine Arts. New York: 1923.

_____. "The Architect as Collaborator with the Engineer." AF 49 (July 1928): pp. 97-104.

_____. "Festive Stage Setting." AF 59 (July, 1933): p.4.

_____. "Ten years of Modernism." AF (August 1933).

Croly, Herbert. The Promise of American Life. New York: 1911.

_____. "Rich Men and Their Homes." AR 12 (May 1902): pp. 27-32.

_____. "The Architecture of Ideas." AR 15 (April 1904): pp. 361-84.

_____. "The New use of Old Forms." AR 17 (April 1905): pp. 271-93.

_____. "What is Indigenous Architecture." AR 21 (June 1907): pp. 434-42.

_____. "Controlling Economic Factors in Current Building." AR 56 (August 1924): pp. 115-6.

_____. "Architectural Response to Social Change," AR, v. 58 (August 1925): p. 186.

_____. "A New Era of Building." AR 58 (September 1925): p. 289.

_____. "A New Dimension in Architectural Effects." AR 57 (January 1925): pp. 93-4.

_____. "New York Skyscrapers." AR 61 (April 1927): pp. 374-75.

_____. "Modern Problem in Architectural Education." AR, v.63 (May 1928): p. 469.

_____. "The Scenic Function of the Skyscrpaer." AR. v. 63 (June 1928): p. 77.

Croly, Herbert, and Walter Lippman. "Editorial." New Republic, (March 3, 1920): p. 30.

"Cubing of Buildings." AR 58 (October 1925): p. 393.

Cunningham, Harry. "The Convention - As One Architect Saw It." AIAJ 11 (June 1923): p. 239.

Curtis, Nathaniel C. Architectural Composition. Cleveland: 1923.

Dana, Richard. "The Best House for the Small Wage Earner." In Southern Pine Association,
        Houses for Workmen. New Orleans: 1919.

David, Arthur [Herbert Croly]. "The Architecture of Ideas." AR 15 (April 1904): pp. 361-84.

De Forest, Robert. "Art in Merchandise: Notes on the Relationship of Stores and Museums."
        Metropolitan Museum of Art Industrial Art Monograph 4 :1928; Reprinted as "Getting
        in Step with Beauty." American Review of Reviews (January 1928): p. 5.

Delano, Frederic. "Zoning Laws and Their Relation to Taxation." In Annals of the American
        Academy of Political and Social Science, 153:II (May 1931), p. 42.

Dell, Floyd. Homecoming: An Autobiography. New York: 1933.

Department of Labor. Standards Recommended for Permanent Housing Developments.
        Washington, DC: March 1918.

Edgell, George. The American Architecture Today. New York: 1928.

"Editorial." AA 132 (October 1927): pp. 521-22.

Edwards, J.L. "The Empire State Building, III: The Structural Frame." AF 53 (August 1930): pp.
        241-46.

Embury, Aymar, II. "New York's New Architecture: The Effect of the Zoning Law on High
        Buildings." AF 35, no. 4 (October 1921): pp. 121-26.

"An Exhibition of Contemporary European Industrial Arts." Bulletin of the Metropolitan Museum
        of Art 21 (January 1926): p. 2.

Farrier, C.W., New York City, Letter to Carl Landefeld, Associate in the office of Raymond
        Hood, March 14, 1930. Division of Works, CPIE, Chicago , CPIE UIC folder 5-25.

Ferran, Albert. "The Teaching of Architecture in the United States." AIAJ 12 (August 1924): pp.
        359-63.

Ferriss, Hugh. The Metropolis of Tomorrow. New York: 1929.

"Fifty-Second Annual Convention." AIAJ 7 (April 1919).

"Fifty-Third Annual Convention - President's Address." AIAJ 7 (June 1920): pp. 220-22.

"Fifty-Third Annual Convention." AIAJ 8 (June 1920).

"Fifty-Seventh Annual Convention." AIAJ 12 (June 1924): p. 275.

Filene, Edward and Charles W. Wood. Successful Living in this Machine Age. New York: 1932.

Ford, George, ed. City Planning Progress in the United States. Washington DC: 1917.

Ford, George. "Regional and Metropolitan Planning: Principles, Methods, Cooperation."
    Prepared for National Conference on City Planning, Baltimore, MD, April 30 - May 2,
    1923, Special Collections, Harvard University, Loeb Library, VF NAC 6100
    (unpaginated).

_____. "The Design of Airports." AA v.132 (November 2, 1927): pp. 561-68.

Ford, Henry. My Life and Work. Garden City, NY: 1923.

Frankl, Paul. New Dimensions: The Decorative Arts of Today in Words and Pictures. New York:
    1928.

Fuller, Buckminster. "A House for Mass-Production." AF 51 (July 1929): pp. 103-4.

_____. "Dymaxion House." AF (March 1932): pp. 285-86.

Garfield, Abram. "Submitting Sketches." AIAJ 16 (January 1928): p. 9.

Geddes, Norman Bel. Horizons. New York: 1932.

Gillespie, H.S. "The Bush Terminal Sales Building." Arch 39 (January 1919): pp. 1-5.

Guptell, Arthur. Sketching and Rendering in Pencil. New York: 1922.

Hamlin, Talbot Faulkner. The Enjoyment of Architecture. New York: 1916.

_____. The American Spirit in Architecture. New Haven: 1926.

_____. "Is Originality Leading Us into a New Victorianism." AA v. 141 (February 1932).

Harbeson, John. The Study of Architectural Design with Special Reference to the Problem of the
    Beaux Arts Institute of Design. New York: 1927.

Harmon, Arthur Loomis. "The Design of Office Buildings." AF 52 (June 1930): p. 819.

Harris, John. "Report of the Subcommittee on Traffic Regulations and Street Uses." In Report of
    the City Committee on the Plan and Survey, M. O'Brien et al. New York: 1928.

Hegeman, Werner, and Elbert Peets. American Vitruvius: An Architects' Handbook of Civic Art.
    New York: 1922.

"Henry Bacon." AIAJ 12 (June 1924): pp. 276-77.

Hirschfeld, George. "To Modernize or to Build?" AF 53 (August 1930): pp. 261-66.

Hitchcock, Henry Russell. Modern Architecture: Romanticism and Reintegration. New York: 1929.

Holden, Thomas. "The Building Prospect for 1926." AR 59 (January 1926): pp. 83-5.

Holsman, Henry. "The Professional Idea in Architecture." AIAJ 7 (July 1919): p. 333.

_____. "A Pertinent Question." AIAJ 7 (December 1919): p. 545.

_____. "Public Architectural Service." AIAJ 9 (January 1921): p. 21.

_____. "The Labor Situation and the Landis Building Trades Agreement." AIAJ 9 (September 1921): pp. 343-8.

Hood, Raymond. Letter to Allen Albert, March 13, 1928. UIC CPIE, Chicago, folder 5-25.

_____. "Exterior Architecture of Office Buildings." AF v. 41 (Sept. 1924).

_____. "The American Radiator Company Building, New York. AA v. 126 #2459 (November 19 1924): pp. 467-479.

_____. "The Tribune Tower - the Architect's Problem." Western Architect v. 34 #11 (November 1925): p. 114 cf.

_____. "Tower Buildings and Wider Streets." AA v.132 (July 5, 1927): pp. 67-8.

_____. "A City Under a Single Roof." Nation's Business (November 1929): pp. 19-20, 206.

_____. "The Spirit of Modern Art." AF 51 (November 1929): pp. 445-6.

_____. "Beauty in Architecture." AF, v. 53 #8 (August 1930): p. 186.

_____. "The News Building." AF 53 (November 1930): pp. 530-32.

_____. "The Design of Rockefeller City." AF v. 56 #1 (January 1932): pp. 1-12.

_____. "Country Towers: Proposed New Type of Suburban Housing." National Real Estate Journal, (April 1932): p. 27.

_____. "Rockefeller Center." SBAA Yearbook, (1933): pp. 69-73.

Hooper, Parker Morse. "Modern Architectural Decoration." AF 48 (February 1928): p. 153.

Horowitz, Louis, and Boyden Sparkes. The Towers of New York. New York: 1937.

Hostach, Ellow. "Reflections on the Exposition des Arts Decoratifs." AF 42 (January 1926): p. 11.

"The Housing Division of the Emergency Fleet Corporation During the War." AIAJ 7 (January 1919): p.41.

Howells, John Mead. John Mead Howells. New York: 1939.

_____. "The Verticality of the Skyscraper." AA v. 134 (20 December 1928): pp. 787-819.

_____. "Vertical or Horizontal Design." AF 52 (June 1930): p. 782.

Hubbard, Theodora Kimball and Henry. Our Cities Today and Tomorrow: A Survey of Planning and Zoning Progress in the United States. Cambridge, MA: 1929.

Hubbell, Benjamin. "The New American Architecture." AA, vol. 132, (September 20, 1927): pp. 359-361.

"Institute Directors Move to Advance the Status of Architecture" AIAJ 16 (January 1928): p. 5.

"An Interesting Zoning Problem," 9 February 1929. Typescript in Special Collections, Loeb Library, Harvard University, Cambridge, Ma., VF NAC 3480.

"Interiors from the Ile de France." AR 63 (January 1928): pp. 62-4.

James, Harlean. "Is the Skyscraper a Public Nuisance." Worlds Work 54 (May 1927).

Jones, Sullivan. "Editorial." AIAJ 15 (November 1927): pp. 341-42.

_____. "Public Buildings and the Architect." AF 58 (April 1928): pp. 577-78.

Jordy, William, and Ralph Coe, eds. American Architecture and Other Writings by Montgomery Schuyler. Cambridge, MA: 1961.

Kahn, Albert. "Designing Modern Office Buildings." AF 52 (June 1930): pp. 775-77.

_____. "Federal Aid to the Social Welfare." AF 57 (August 1932): p. 96.

Kahn, Ely Jacques. "The Architectural League Exhibition of 1926." AR 59 (March 1926): pp. 226-7.

_____. "Economics of the Skyscraper." AR 63 (April 1928): p. 298.

_____. "The Architecture of Industrial Buildings." AF 51 (September 1929): pp. 273ff.

_____. "The Province of Decoration in Modern Design." Creative Art 5 (December 1929): p.886.

_____. "Civilized Architecture." AF 52 (June 1930): p. 785.

Kahn, Moritz. "The Planning of Industrial Buildings." AF 51 (September 1929): pp. 265ff.

Keeble, John. "The Professional Idea." AIAJ 7 (April 1919): pp. 199-201.

"Keen Competition in the Mortgage Field." NYT, 23 October 1927, 11:1.

Kelsey, Albert. "The Question of Precedent." AIAJ 12 (December 1924): pp. 536-37.

Kilham, Arthur. "Housing the Single Worker." AF 28 (April 1918): pp. 161-7.

Kimball, Fiske, and George Edgell. A History of Architecture. New York: 1918.

Kimball, Fiske. "Louis Sullivan - an Old Master." AR 57 (April 1924): pp. 289-305.

Kimball, Thomas. "The Institute's Offer to the President." AIAJ 5 (December 1917): pp. 641-3.

_____. "The Post-War Committee: the Professional Principle." AIAJ 7 (May 1919): pp. 215-216.

Knoblach, Philip. Good Practice in Construction. New York: 1923.

Knowles. "Engineering Problems of Regional Planning." Proceedings of the National Conference on City Planning, October 21 1919, p. 1-3.

Lamb, William. "The Empire State Building, VII: The General Design." AF 54 (January 1931): pp. 1-8.

Lawson, Harold. "Is Steel Frame Construction Capable of Architectural Treatment?" AR 49 (April 1921): p. 375.

"The League Exhibition." AF 44 (April 1926): p.52.

Le Corbusier. Towards a New Architecture. Frederick Etchells, trans. London: 1924.

Lench, Charles. The Promotion of Commercial Buildings. New York: 1932.

Lescaze, William. "The Future American Country House." AR 64 (November 1928): p. 417.

Lewis, Harold, and William Wilgus, Daniel Turner. Regional Survey of New York VIV: Transit and Transportation. New York: 1928.

Lewis, Nelson. The Planning of the Modern City. New York: 1916; reprint 1923.

_____. "The Common Sense of Civic Centers." American City Magazine, 21 (July 1919): p. 6.

"Louis Henry Sullivan." AIAJ 12 (June 1924): pp. 275-76.

Lubchez, Ben. "The Cabinet of Doctor Caligari." AIAJ 9 (1921): pp. 213-15.

Ludlow, William. "Scientific Management in the Architect's Office." Brickbuilder 21 (May 1912): pp. 138-9.

MacKenzie, R.D. The Metropolitan Community. New York: 1933.

"The Macy Exposition of Art in Industry." AR 64 (May 1928): pp. 137ff.

Magonigle, H. van Buren. "Plagiarism as a Fine Art." AIAJ 12 (June 1924): pp. 259-60.

Mazur, Paul. American Prosperity: Its Causes and Consequences. New York: 1928.

McEntee, Arthur. "Recent Development in the Architectural Treatment of Concrete Industrial Buildings." Arch 43 (January 1921): pp. 18-21.

Mellon, Andrew. "Developing the Nation's Capital." AIAJ 16 (December 1928): p. 449-53.

"Mental Cross Section of the Institute." AIAJ 15 (March 1927): pp. 105-112.

Metropolitan Museum of Art. Forty-Eighth Annual Report of the Trustees. (December 1917).

_____. Forty-Ninth Annual Report of the Trustees. (December 1918).

_____. The Architect and the Industrial Arts: An Exhibition of Contemporary American Design. New York: February 12-March 24, 1929.

Metzenbaum, James. Law of Zoning. New York: 1930.

Mitchell, William. "The Question of Precedent." AIAJ 52 (June 1930): p. 780.

"Modern Decorative Arts: A Loan Exhibition." Bulletin of the Metropolitan Museum of Art 21 (February 1926): p. 36.

"Modern French Decorative Arts." AA v. 133 (5 April 1928): p. 434.

"For Modernism and Regionalism." AA v. 133 (5 January 1928): p. 13.

Moore, Charles. The Promise of American Architecture. Washington DC: 1909.

_____. Daniel H. Burnham. New York: 1921.

_____. "Training for the Practice of Architecture." AR 49 (January 1921): p. 58.

_____. "Reply." AR 49 (April 1921): p. 376.

Mumford, Lewis. The Story of Utopias. New York: 1922.

_____. Sticks and Stones: A Study of American Architecture and Civilization. New York: 1924.

_____. The Golden Day: A Study of American Experience and Culture. New York: 1926.

_____. "The Heritage of the Cities Movement in America: An Historical Survey." AIAJ 7 (August 1919): pp. 349-54.

_____. "Machinery and the Modern Style." New Republic (August 3, 1921): pp. 263-65.

_____. "The City." In Civilization in the United States, Harold Stearns, ed. New York: 1922.

_____. "The Architectural League's Exhibition." AIAJ 11 (March 1923): pp.111-13.

_____. "Architectural Piety." AIAJ 11 (August 1923): pp. 304-6.

_____. "Regional Planning Schemes." AIAJ 11 (October 1923): pp. 404-5.

_____. "Community Planning and Housing." AIAJ 11 (December 1923): p. 492.

_____. "Report of the Committee on Community Planning." AIA Proceedings of the Fifty-Seventy Annual Convention. Washington DC: 1924.

_____. "Architecture and History." AIAJ 12 (July 1924): pp. 191-2.

_____ . "The Imperial Age." AIAJ 12 (August 1924): pp. 166-71.

_____ . "Our Modern Style." AIAJ 12 (January 1924): pp. 26-8.

_____ . "Architecture and Broad Planning: Realities vs. Dreams." AIAJ 13 (June 1925): pp. 198-99.

_____ . "Climax." AIAJ 13 (December 1925): pp. 454-56.

_____ . "Barclay Vesey Building." New Republic (6 July 1927).

_____ . "Mass Production and the Modern House." Architectural Record v.67; "Part I," (January 1930): pp. 13-20; "Part II," (February 1930): pp. 110-116.

_____ . "The Plan of New York." New Republic LXXI (June 15, 1932); (June 22, 1932).

"Nebraska Capital Competition." AIAJ 7 (August 1920): pp. 299-306.

Newman, James. "Factors in Office Building Planning." AF 52 (June 1930): p. 881.

"News Notes." AIAJ 9 (July 1921): p. 252.

Nimmons, George. "Modern Industrial Buildings." AR 44 (November 1918): pp. 414-21; (December 1918): pp. 533-49; AR 45 (January 1919): pp. 27-43; (February 1919): pp. 148-88; (March 1919): pp. 262-82; (April 1919): pp. 343-55; (May 1919): pp. 450-70; (June 1919): pp. 506-25.

_____ . "The Passing of the Skyscraper." AIAJ 10 (November 1922): pp. 356-61.

_____ . "Skyscrapers in America." AIAJ 11 (September 1923): p. 370.

_____ . "Industrial Buildings, Their Great Architectural Opportunities and an Appeal to the Architects to Help the American Industries Whose Buildings They Have Neglected in the Past." AA 129 (5 January 1926): pp. 15-27.

_____ . "The New Renaissance in Architecture as seen in the Desing of Mail Order Houses." AA, vol. 134: pp. 141-50.

Nolan, John. Replanning Small Cities. New York: 1912.

"Office Buildings." AF 48 (January 1928): pp. 5-23.

Official Guidebook of the Fair. Chicago: 1933.

Ogburn, William. Social Change. New York: 1922.

Oliver, Richard. Bertram Grosvenor Goodhue. Cambridge, Mass.: 1983.

Oltar-Jevsky, W.K. Contemporary Babylon in Pencil Drawings. New York: 1933. (Introduction by H.W. Corbett).

Owings, Nathaniel. The Spaces in Between: An Architect's Journey. Boston: 1973.

_____. "New Materials and Building Methods for the Chicago Exposition." AR 71:4 (April 1932): pp. 279-89.

Pard, Edwin Avery. New Backgrounds for a New Age. New York: 1927.

Paris, William Francklyn. "International Exposition of Modern Industrial and Decorative Arts in Paris." AR v. 58 (1925): pp. 265ff.

Pencil Points Press. Winning Designs, 1904-1927: the Paris Prize in Architecture. New York: 1928.

Penty, Arthur. "Toward a National Building Guild." AIAJ 7 (April 1919): pp. 148-50. "The Crisis in Architecture," Part I, AIAJ 7 (February 1920) pp. 55-60; Part II, 8 (April 1920): pp. 145-50; Part III, 8 (June 1920): pp. 208-12; Part IV, 8 (July 1920): pp.252-55.

_____. "Architecture in the United States." AIAJ 12 (November 1924): pp. 473-78.

"A Pertinent Question." AIAJ 7 (December 1919): p. 545.

"A Plan for the Concentration of New York's Municipal Government." NY Times (Jan. 12, 1930) Sec. 7 p. 5.

"Plan of New York and Its Environs." Minutes of the First RPA Meeting. New York City: May 10, 1924.

Pollard, W.L. (ed.). The Annuals of the American Academy of Political and Social Science. Issue "Zoning in the United States," Philadelphia: 1931.

Pomeroy, Hugh. "Regional Planning in Progress: First Annual Report of the Los Angeles County Regional Planning Commission." Proceedings of the 16th National Conference on City Planning, p. 2.

Pond, Irving. The Meaning of Architecture. New York: 1918.

_____. "Zoning and the Architecture of Big Buildings." AF 25 (October 1921): p. 131-3.

"Post-War Committee." AIAJ 7 (July 1919): pp. 156, 325-27.

"Post-War Committee - Preliminary Conclusions." AIAJ 7 (September 1919): pp. 390-95.

"Post-War Committee - Preliminary Outline of Programme." AIAJ 7 (January 1919): pp. 7, 25-28.

"Post-War Committee on Architectural Practice." AIAJ 7 (January 1919): p. 7, 158.

"Post-War Committee - Some Opinions." AIAJ 7 (October 1919): p. 454-58.

"The Present Situation in the Building Industry." AIAJ 11 (June 1923): pp. 247-49.

"The President's Address." AIAJ 12 (June 1924): p. 273.

"The President's Address." AIAJ 15 (June 1927): pp. 222-25.

"President's Address - 53rd Annual Convention of the Institute." AIAJ 8 (June 1920): pp.220-22.

<u>Proceedings of the First Regional Planning Conference of L.A. County. Cal</u>. Pasadena: January 21, 1922.

"A Product of General Houses." <u>AF</u> 57 (July 1932): pp. 65-72.

Purdy, Lawson, et. al. <u>Zoning as an Element in City Planning and for Protection of Property Values. Public Safety and Public Health</u>. (American Civic Association) Washington, DC: 1920.

Regional Plan Association. <u>Graphic Regional Plan</u>. New York: 1929.

Rice, Norman. "Small House Construction: A Problem to be Solved." <u>AF</u> 55 (August 1931): pp. 217-22.

Richards, Charles. <u>Art in Industry</u>. New York: 1922.

_____. <u>Industrial Art and the Museum</u>. New York: 1927.

Richards, Charles, et al. <u>Report of the Commission Appointed by the Secretary of Commerce to Visit and Report Upon the International Exposition of Modern Decorative and Industrial Art in Paris. 1925</u>. Washington DC: 1925.

Robertson, Paul. "The Skyscraper Office Building." <u>AF</u> 52 (June 1930): pp. 878-80.

Robinson, Charles Mulford. <u>Modern Civic Art, or the City made Beautiful</u>. New York: 1904.

_____. <u>Report or the New York Improvement Commission</u>. New York: 1907.

_____. <u>City Planning</u>. New York: 1916.

_____. <u>The Improvement of Towns and Cities</u>. New York: 1917.

_____. <u>Modern Civic Art or the City Made Beautiful</u>. New York: 1918.

Root, George. "Can the Architect Serve the Speculative Builder." <u>AF</u> 48 (January 1928): p. 126.

Saarinen, E. "A New Architectural Language for America." <u>Western Architect</u>, v. 31 #1 (January 1923): pp. 37-38.

Scarlett, Frank and Marjorie Tomley. <u>Arts Decoratifs 1925: A Personal Recollection of the Paris Exhibition</u>. New York: 1975.

Schuyler, Montgomery. "The Brooklyn Bridge as a Monument." <u>Harper's Weekly</u> 27 (May 26, 1883): p. 326ff.

_____. "A Critique of the Work of Adler and Sullivan." <u>AR</u> (December 1895).

_____. "The Works of Cram, Goodhue and Ferguson." <u>AR</u> 24 (January 1911): p. 87.

Scott, Walter Dill. <u>Influencing Men in Business</u>. New York: 1911.

"The Secretary's Table." <u>AIAJ</u> 10 (February 1922): p. 49.

Sexton, R.W. "The Old Order Changeth: The Break with Tradition Has Spelled Oppurtunity for Pioneer Spirits." AA v. 142 #2613 (November 1932): pp. 14-17.

_____. The Logic of Modern Architecture. New York: 1929.

Sharp, Dennis. Alfred C. Bossom's American Architecture 1903-26. London: 1984.

Shreve, Richmond. "The Empire State Building Organization." AF 52 (June 1930): pp. 770-74.

_____. "The Empire State Building, II: The Window-Spandrel-Wall Detail in its Relation to Building Progress." AF v. 53 (July 1930) pp. 97-104.

Shurtleff, Flavell. Carrying Out the City Plan. New York: 1914.

Simon, E. "Learning the Facts from the Trends." AF 54 (January 1931): pp. 115-16.

Simon, Louis. "Development of Proposed Federal Building Group at Washington." AIAJ 16 (February 1928): pp. 61-62.

Skidmore, Louis. "Planning and Planners." AF 59 (July 1933): p. 30.

Solon, Leon. "The Passing of the Skyscraper: Formula for Design." AR 60 (January - June 1924): pp. 135-144.

_____. "The Exposition at Grand Central Palace: Education Policies of the Architectural League of New York." AR 58 (July 1925): pp. 27-38.

_____. "Will the Exposition Regain Artistic Leadership for France." AR 58 (October 1925): p. 391.

_____. "The Titan City Exhibition." AR 59 (January 1926): p. 94.

_____. "The Report of the International Exposition of Decorative and Industrial Art in Paris, 1925." AR 61 (February 1927): pp. 181-82.

_____. "Modernism in Architecture." AR 60 (February 1927).

Starrett, Paul. Changing the Skyline. New York: 1938.

Starrett, William. "The Mountains of Manhattan." Saturday Evening Post, 12 May 1928, pp. 24ff.

_____. Skyscrapers and the Men Who Build Them. New York: 1928.

"State Societies." AIAJ 7 (July 1919): p. 333.

"States which have Laws Regulating the Practice of Architecture," 23 April 1937. Typescript by NCARB, Avery Library, Columbia University, New York.

Steele, William. "The Architect and the Engineer." AIAJ 10 (March 1922): pp. 62-66.

_____. "The Use of Precedent in Architectural Design." AIAJ 12 (June 1924): p. 266.

Stein, Clarence. Commission Report of the New York State Committee on Reconstruction. Albany, NY: 1926.

_____. "Zoning in Atlanta." AIAJ 10 (June 1922): p. 205.

Stowell, Kenneth. "Editorial." AF 54 (April 1931): p. 439.

_____. "A Preliminary Plan of the Construction Industry." AF 55 (August 1931): p. 126.

Sullivan, Louis. The Autobiography of an Idea. New York: 1924.

_____. "The Chicago Tribune Competition." AR 53 (February 1923): pp. 151-57.

_____. "Concerning the Imperial Hotel, Tokyo, Japan." AR 53 (May 1923): pp. 333-352.

_____. "Reflections on the Tokyo Disaster." AR 55 (February 1924): pp. 113-117.

Tallmadge, Thomas. The Story of Architecture in America. New York: 1927.

_____. "The Development of the Office Building Since 1924." AF, v. 52 #6 (June 1930).

Taylor, C. Stanley. "Architectural Services from the Business Point of View." AF 48 (January 1928): pp. 113-14.

_____. "The Architect's Position in Relation to Mortgage Financing." AF 48 (May 1928): pp. 761-63.

The International Competition for a New Administration Building for the Chicago Tribune. Chicago: 1922; reprinted 1980.

Thomas, Harlan. "The Relation of Construction to Design." AIAJ 14 (March 1926): pp. 91-94.

Tudor, Richard Wallace. "The Architectural Profession in the Present Day." AIAJ 8 (March 1920): p. 127.

Turner, H.C. "The Selection of the Builder." AF 33 (October 1930): p. 522.

U.S. Dept. of Commerce. A Standard State Zoning Enabling Act. Washington DC: 1922.

U.S. Department of Labor. Standards Recommended for Permanent Housing Developments. Washington DC: March, 1918.

_____. Report of the United States Housing Corporation, vols. 1 & 2, George Ford, ed. Washington DC: 1919.

_____. Report of the United States Housing Corporation, Henry Hubbard, ed. Washington DC: 1920.

"The United States Housing Corporation of the Department of Labor During the War." AIAJ 7 (February 1919): p.59.

U.S. Shipping Board, Emergency Fleet Corporation. Types of Housing for the Shipbuilder. Philadelphia, PA: 1919.

_____. Housing the Shipbuilder. Philadelphia, PA: 1920.

"Utilization of Working Schedules in Office Practice." AA 133 (5 May 1928): pp. 603-12.

Van Brunt, Henry. "Architecture at the World's Columbian Exposition." Century Magazine 66 (July 1892): pp. 385-99. Reprinted in William Coles, ed. Architecture and Society: Selected Essays of Henry Van Brunt. Cambridge, Ma: 1969.

_____. "The Growth of Characteristic Architectural Style in the United States." AIAJ 27 (1893): pp. 242-53. Reprinted in William Coles, ed. Architecture and Society: Selected Essays of Henry Van Brunt. Cambridge, Ma: 1969.

_____. "The Historic Styles and Modern Architecture." AR I (August 1, 1892): pp. 59-61; II (January 2, 1893): pp. 1-4. Reprinted in William Coles, ed. Architecture and Society: Selected Essays of Henry Van Brunt. Cambridge, Ma: 1969.

Van Pelt, John. "Public Information About Architecture." AIAJ 10 (December 1922): pp. 397-98.

Veblen, Thorstein. The Engineers and the Price System. New York: 1933.

Viollet-le-Duc, Eugene-Emmanuel. Discourses on Architecture. (trans. Henry Van Brunt) Boston: 1875-81.

Vogelsgang, Shepard. "The Museum and the Architect." AF 50 (April 1929): p. 591.

Voorhees, Stephen, and Ralph Walker. "The Machine and Architecture." In Toward Civilization, Charles Beard, ed. New York: 1930.

Waid, D. Everett. "The Business Side of an Architect's Office, Part I" Brickbuilder 11:1 (April 1902): pp. 69-70; Part II (August 1902): pp. 91-93; Part III (September 1902): pp. 157-60.

Walker, Ralph. Ralph Walker, Architect. New York: 1957.

_____. "New York Telephone Building." PP (November 1927); reprinted in Walker, Ralph Walker, Architect. New York: 1957.

_____. "A New Architecture." AF 48 (January 1928): pp. 1-4.

_____. "The Relation of Skyscrapers to Our Life." AF 52 (May 1930): pp. 689-95.

Whitaker, Charles, and Frederick Ackerman, Richard Childs, Edith Elmer Wood. The Housing Problem in War and in Peace. Washington DC: 1918.

Whitaker, Charles. "Post-War Committee - Preliminary Conclusions." AIAJ 7 (September 1919): p.390-92.

_____. "Shadows and Straws." AIAJ 7; (December 1919): pp. 505-510; (April 1919): p. 144; (December 1921): pp. 373-74.

_____. "The First Inter-Professional Conference." AIAJ 8 (January 1920): pp. 6-8.

_____. "Defending the Profession." AIAJ 10 (June 1922): p. 206.

Whitnall, Gordon. "History of Zoning." In Zoning as an Element in City Planning and for the Protection of Property Values, Public Safety and Public Health, Lawson Purdy et al. Washington DC: 1920.

_____. "History of Zoning." Annals of the American Academy of Political and Social
          Science, 155:II (May 1931): pp. 1-14.

Whitten, Robert. "Regional Zoning." National Conference on City Planning: 1923.

Wilcox, W.R.B. "What is the Use of Precedent Doing to American Architecture." AIAJ 12 (June
          1924): p.269.

Wood, Edith Elmer. Housing the Unskilled Wage Earner. New York: 1919.

_____. "The Spanish Linear City." AIAJ 9 (May 1921): pp. 169-74.

_____. "Recent Housing Work in Western Europe." AR, v.53 (1923): pp.173 ff.

_____. Recent Trends in American Housing. New York: 1931.

Wooley, Clarence. "Good Architecture a Commercial Asset." AA, v. 129 (5 January 1926): pp.
          55-56.

"World's Fair of 1933." PP 10 (February 1929): pp. 216-28.

Wright, Frank Lloyd. "The Art and Craft of the Machine," (1901). In The Roots of
          Contemporary Architecture, Lewis Mumford, ed. New York: 1959.

Wright, Henry. "The Six Cylinder House with Streamline Body." AIAJ 14 (April 1926): pp. 175-
          78.

Wright, Frank Lloyd. "In the Cause of Architecture, II: Standardization - The Soul of the
          Machine." AR 61 (June 1927): pp. 478-80.

_____. "In the Cause of Architecture, III: Steel." AR 62 (August 1927): pp. 163-66.

_____. "In the Cause of Architecture, VII: Sheet Metal and a Modern Instance." AR 64
          (October 1928): pp. 334-42.

"The Zoning Report of the Department of Commerce." Western Architect (April 1923): p.37.

Secondary Sources Cited:

"AIA Contracts 100 Years Old." AIA Memo (October 1988): p. 2.

Alderfer, E.B., and H.E. Michl. Economics of American Industry. New York: 1950.

Anderson, H. Dewey, and Percy Davidson. Occupational Trends. Stanford, CA: 1940.

Arwas, Victor. Art Deco. New York: 1980.

Bacon, Mardges. Ernest Flagg: Beaux-Arts Architect and Urban Reformer. Cambridge, MA:
          1985.

Baker, Paul. Richard Morris Hunt. Cambridge, MA: 1980.

Banham, Rayner. A Concrete Atlantis: U.S. Industrial Building and European Modern Architecture. Cambridge, MA: 1986.

Bannister, Turpin. The Architect at Mid-Century: Evolution and Achievement. New York: 1954.

Barber, William. From New Era to New Deal: Herbert Hoover, the Economists, and American Economic Policy, 1921-1933. New York: 1985.

Baroni, Daniel. Grattacieli Architectural Americana tra Mito e Realta 1910-1939. Milan: 1979.

Becker, William. The Dynamics of Business: Government Relations, Industry and Exports, 1893-1921. Chicago: 1982.

Best, Gary Dean. The Politics of American Individualism: Herbert Hoover in Transition, 1918-1921. Westport, CT: 1975.

Bletter, Rosemary, and Cervin Robinson. Skyscraper Style: Art Deco New York. New York: 1975.

Boyer, Christine. Dreaming the Rational City: The Myth of American City Planning. Cambridge, MA: 1983.

Brandes, Stuart. American Welfare Capitalism, 1880-1940. Chicago: 1976.

Brody, David. Workers in Industrial America: Essays on the Twentieth Century Struggle. New York: 1980.

Bush, Donald. "Streamlining: Functionalism in American Product Design, 1927-39." Ph. D. diss., Univ. of New Mexico, 1973.

Candee, Richard. Atlantic Heights: A World War I Shipbuilders' Community. Portsmouth, NH: 1985.

Cardwell, Kenneth. Bernard Maybeck. Salt Lake City: 1983.

Chandler, Alfred. Strategy and Structure: Chapters in the History of Industrial Enterprise. Cambridge, MA: 1962.

_____. The Visible Hand: The Managerial Revolution in American Business. Cambridge,Ma: 1977.

Ciucci, Giorgio, Francesco Dal Co, Mario Maniera-Elia, Manfredo Tafuri. The American City: From the Civil War to the New Deal. Cambridge, MA: 1979.

Cohen, G.A. Karl Marx's Theory of History. Princeton, NJ: 1978.

Colean, Miles. American Housing: Problems and Prospects. New York, NY: 1947.

Condit, Carl. American Building Art: The 20th Century. New York: 1961.

_____. The Port of New York. Chicago: 1981.

Conner, Valerie Jean. The National War Labor Board: Stability, Social Justice and the Voluntary State in World War I. Chapel Hill, NC: 1983.

391

Craig, Lois, et al. The Federal Presence: Architecture, Politics and Symbols in United States Government Building. Cambridge, MA: 1978.

Creese, Walter. "American Architecture, 1918 to 1933, with Special Emphasis on the European Influence." Ph.D. diss., Harvard University, 1950.

Cuff, Robert. The War Industries Board: Business Government Relations during World War I. Baltimore: 1973.

Dean, Andrea. "Seventy Five Years of American Architecture." Arch (December 1987): p. 127-29.

Derber, Milton. The American Idea of Industrial Democracy. Urbana, IL: 1970.

Dostoglu, Sibel. "Towards Professional Legitimacy and Power." Ph.D. diss., University of Pennsylvania, 1982.

Egbert, Donald. The Beaux-Arts Tradition in French Architecture. Princeton, NJ: 1980.

Ehrenreich, Barbara and John. "The Professional Managerial Class." Radical America, (March-April 1977).

Ewen, Stuart. Captains of Consciousness: Advertising and the Social Roots of the Consumer Culture. New York: 1976.

Fenske, Gail. "The 'Skyscraper Problem' and the City Beautiful: The Woolworth Building." Ph.D. diss., Massachussetts Institute of Technology, 1988.

Fishbein, Leslie. Rebels in Bohemia: the Radicals of "The Masses." Chapel Hill, NC: 1982.

Frampton, Kenneth, and M. Vellay. Pierre Charreau. London: 1985.

Frampton, Kenneth. "Giedion in America: Reflections in a Mirror." In On the Methodology of Architectural History, Dimitri Porphyrios, ed. New York: 1981.

_____ . "Notes on American Architectural Education from the End of the 19th Century until the 1970's." Lotus #27 (1980): pp. 5-126.

Galambos, Louis. Competition and Cooperation: The Emergence of a National Trade Association. Baltimore: 1966.

Geertz, Clifford. "Ideology as a Cultural System." The Interpretation of Cultures. New York: 1973.

Geison, G. Professions and Professional Ideologies in America. Chapel Hill, NC: 1983.

Gerbler, Leo. Capital Formation in Residential Real Estate. Princeton, NJ: 1956.

Gombrich, Ernst. "Hegel and Art History." In On the Methodology of Architectural History, Dimitri Porphyrios, ed. New York: 1981.

Gouldner, Alvin. The Future of Intellectuals and the Rise of the New Class. New York: 1979.

Green, Martin. New York 1913: the Armory Show and the Paterson Strike Pageant. New York: 1988.

Grossman, Elizabeth. "Paul Philippe Cret: Rationalism and Imagery in American Architecture." Ph.D. diss., Brown University, 1980.

Hawley, Ellis, ed. Herbert Hoover as Secretary of Commerce: Studies in New Era Thought and Practice. Iowa City: 1981.

Hawley, Ellis. "Herbert Hoover, the Commerce Secretariat and the Vision of an Associative State, 1921-1928." Journal of American History LXI (June 1974-March 1975): pp. 116-140.

Herbert, Gilbert. The Dream of the Factory Made House. Cambridge, MA: 1984.

Hildebrand, Grant. Designing for Industry: the Architecture of Albert Kahn. Cambridge, MA: 1974.

Hillier, Bevis. The World of Art Deco. New York: 1970.

Hofstadter, Richard. The Age of Reform. New York: 1955.

Hoover, Herbert. The Cabinet and the Presidency, 1920-1933. The Memoirs of Herbert Hoover, Series, vol. II. New York: 1952.

Hounshell, David. From the American System to Mass Production, 1800-1932: The Development of Manufacturing Technology in the United States. Baltimore: 1984.

Israel, Jerry, ed. Building the Organizational Society: Essays on Associational Activities in Modern America. New York: 1972.

Johnson, David. "The Emergence of Metropolitan Regionalism: An Analysis of the Regional Plan of New York and Its Environs." Ph.D. diss., Cornell University, 1974.

Jordy, William. American Buildings and their Architects: Progressive and Academic Ideals at the Turn of the 20th Century. Garden City, NY: 1972.

Karl, Barry. The Uneasy State: the United States from 1915 to 1945. Chicago: 1983.

Kilham, Walter. Raymond Hood, Architect. New York: 1973.

Kolko, Gabriel. Main Currents in Modern American History. New York: 1976; reprinted 1984.

_____. The Triumph of Conservatism. Glencoe, Il: 1963.

Larsen, Magali. The Rise of Professionalism: A Sociological Analysis. Berkeley, CA: 1977.

Layton, Edwin. The Revolt of the Engineers: Social Responsibility and the American Engineering Professions. Baltimore: 1986.

Lears, Jackson. No Place of Grace: Antimodernism and the Transformation of American Culture. New York: 1981.

Levy, David. Herbert Croly and the "New Republic". Princeton, NJ: 1989.

Lipartito, Kenneth. The Bell System and Regional Business. Baltimore: 1989.

Lohr, Lenox. Fair Management: The Story of the Century of Progress. Chicago: 1952.

Lubove, Roy. Community Planning in the 1920's: The Contribution of the RPAA. Pittsburgh, PA: 1963.

Lucaks, Georg. "Reification and the Consciousness of the Proletariat." In History and Class Consciousness, Georg Lucaks, 87-88. Cambridge, MA: 1971.

McCartin, Joe. "The Failure of Industrial Democracy: the U.S. Labor Movement and the Struggle over "Reconstruction" Following World War I." Paper presented to the American Historical Association Meeting, New York City, Dec. 30, 1990.

Meikle, Jeffrey. Twentieth Century Limited: Industrial Design in America, 1925-1939. Philadelphia: 1979.

Meyer Shapiro, "The Introduction of Modern Art in America: the Armory Show." In America in Crisis. New York: 1952; reprint in Modern Art, 19th and 20th Centuries. New York: 1968.

Mumford, Lewis. Sketches from Life. New York: 1982.

_____. The Roots of Contemporary American Architecture. New York: 1952; reprint, 1972.

Noble, David. America by Design: Science Technology and the Rise of Corporate Capitalism. New York: 1977.

Pells, Richard. Radical Visions and American Dreams: Culture and Social Thought in the Depression Years. Middletown, CN: 1973.

Placzek, Adolf, ed. Macmillan Encyclopedia of Architects. New York: 1982. S.v. "Bertram Grosvenor Goodhue," by Richard Oliver.

_____. MacMillan Encyclopedia of Architects. New York: 1982. S.v. "Shreve, Lamb and Harmon" by Christopher Gray.

Potter, David. People of Plenty: Economic Abundance and the American Character. Chicago: 1954.

Pulos, Arthur. American Design Ethic: A History of Industrial Design. Cambridge, MA: 1983.

Saint, Andrew. The Image of the Architect. New Haven: 1983.

Saylor, Henry. "The AIA's First Hundred Years." AIAJ (May 1957): II:171.

Scarlett, Frank, and Marjorie Townley. Art Decoratifs, 1924. London: 1975.

Schlesinger, Jr., Arthur, ed. The Almanac of American History. New York: 1983.

Schwarz, Jordan. The Speculator: Bernard Baruch in Washington, 1917-1965. Chapel Hill, NC: 1981.

Scott, Mel. American City Planning Since 1890. Berkeley, CA: 1969.

Shapiro, Meyer. "The Introduction of Modern Art in America: The Armory Show." In America in Crisis. New York: 1952; reprinted in Shapiro, Modern Art, 19th and 20th Centuries. New York: 1968.

Shodeck, Daniel. Landmarks in American Civil Engineering. Cambridge, MA: 1987.

Smith, George David. Review of The Bell System and Regional Business, by Kenneth Lipartito. In American Historical Review 96 (April 1991): pp. 612-3.

Soule, George. Prosperity Decade. New York: 1947.

Stern, Robert, et al. Raymond Hood. New York: 1982.

Stern, Robert. George Howe. New Haven, CT: 1975.

Tafuri, Manfredo. Progetto e Utopia. Bari: 1973.

Trachtenberg, Alan. The Incorporation of America: Culture and Society in the Gilded Age. New York: 1982.

Tucci, Douglas. Ralph Adams Cram, American Medievalist. Boston: 1975.

Veronesi, Giulia. Stile 1925. Florence: 1978.

Wiebe, Robert. The Search for Order, 1877-1920. New York: 1967.

Wilensky, H.L. "The Professionalization of Everyone." The American Journal of Sociology 70 (September 1964).

Willis, Carol. "The Modern Skyscraper." Courier XIX:1 (Spring 1984): pp. 29-42.

_____. "The Titan City." Skyline (October 1982): pp. 26-7.

Wilson, Joan Hoff. Herbert Hoover: The Forgotten Progressive. Boston: 1975.

Wilson, Richard Guy. The American Renaissance - 1876-1917. New York: 1979.

_____. The AIA Gold Medal. New York: 1984.

Wilson, Richard Guy, Dianne Pilgram, and Dickran Taskjian. The Machine Age in America, 1918-1941. New York: 1986.

Zunz, Oliver. Making America Corporate. Chicago: 1990.

ILLUSTRATIONS
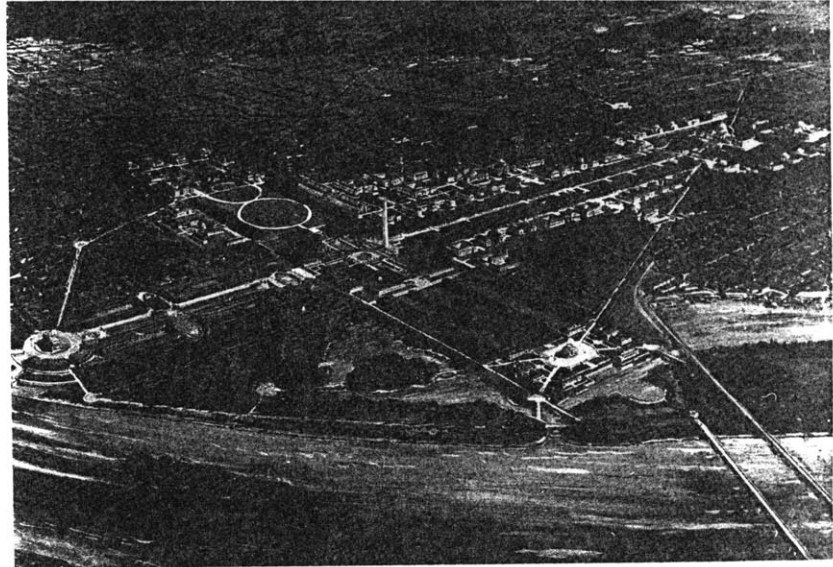
1.1
"Bird's Eye View of General Plan from Point Taken 4000 Feet Above Arlington," U.S. Commission of Fine Arts, by Francis Hoppin, 1902 (John Reps, Washington on View: The National Capital since 1790 (Chapel Hill, 1991), p. 253).

1.2a
The American Academy, Rome, McKim, Mead and White, 1913 (Leland Roth et al., Monograph of the Works of McKim, Mead and White, 1879-1915 (New York, 1915; reprint 1977), pl. 372).

2
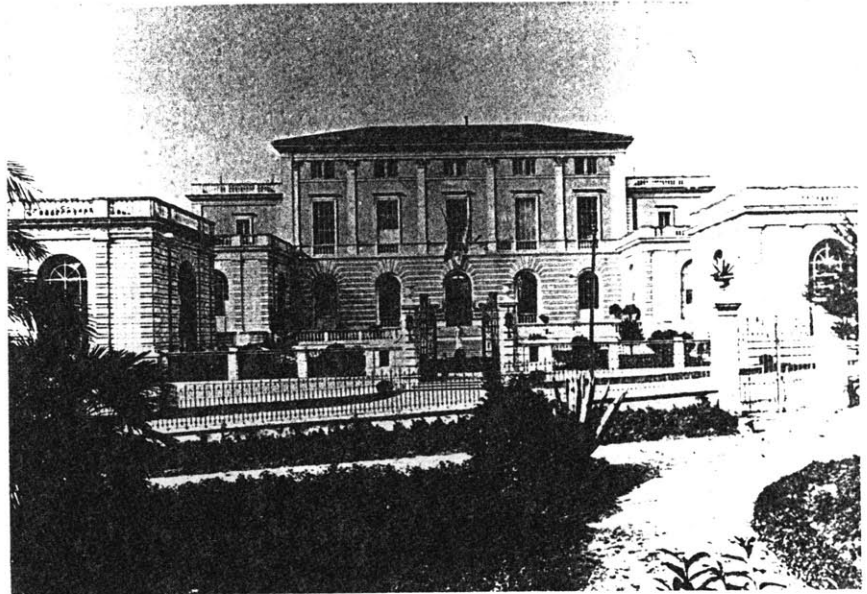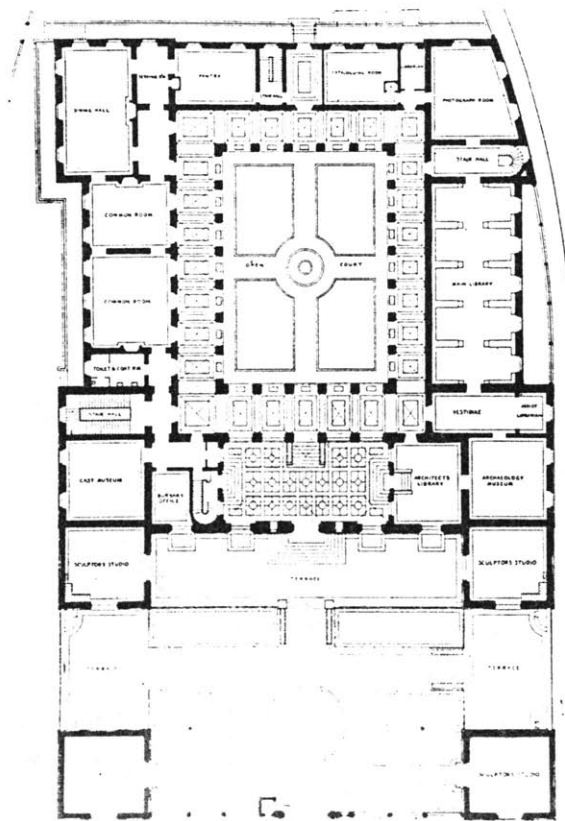
1.2b
The American Academy, plan
(Leland Roth et al., <u>Monograph of
the Works of McKim, Mead and
White, 1879-1915</u> (New York, 1915;
reprint 1977), pl. 373).

1.3
Columbia University Library, New
York City, NY, McKim, Mead and
White, 1893 (Leland Roth et al.,
<u>Monograph of the Works of McKim,
Mead and White, 1879-1915</u> (New
York, 1915; reprint 1977), pl. 48).
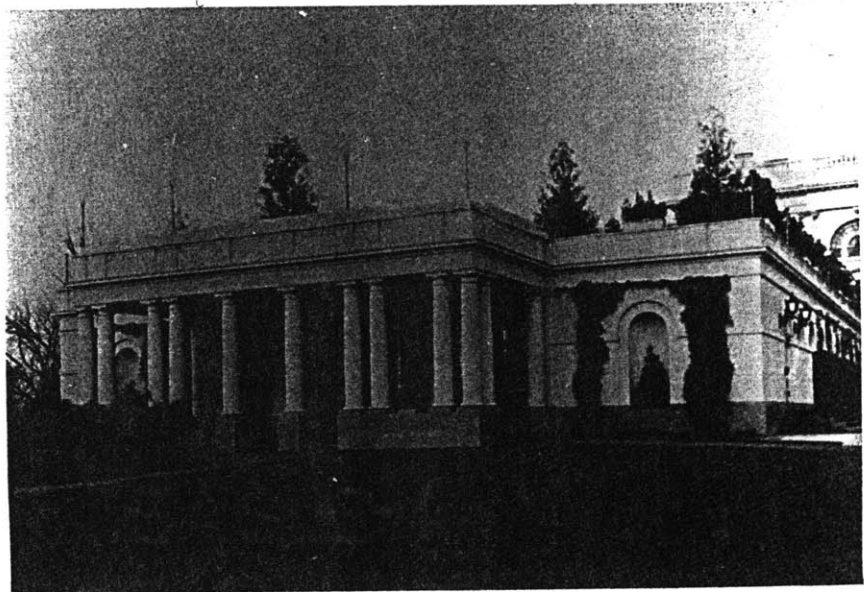
1.4
The White House, Renovations and
Additions, Washington D.C.,
McKim, Mead and White, 1903
(Leland Roth et al., <u>Monograph of
the Works of McKim, Mead and
White, 1879-1915</u> (New York, 1915;
reprint 1977), pl. 175).

1.5a
The White House, the East Room,
Washington D.C., McKim, Mead and
White, 1903 (Leland Roth et al.,
<u>Monograph of the Works of McKim,
Mead and White, 1879-1915</u> (New
York, 1977), pl. 176).

DETAILS OF EAST ROOM
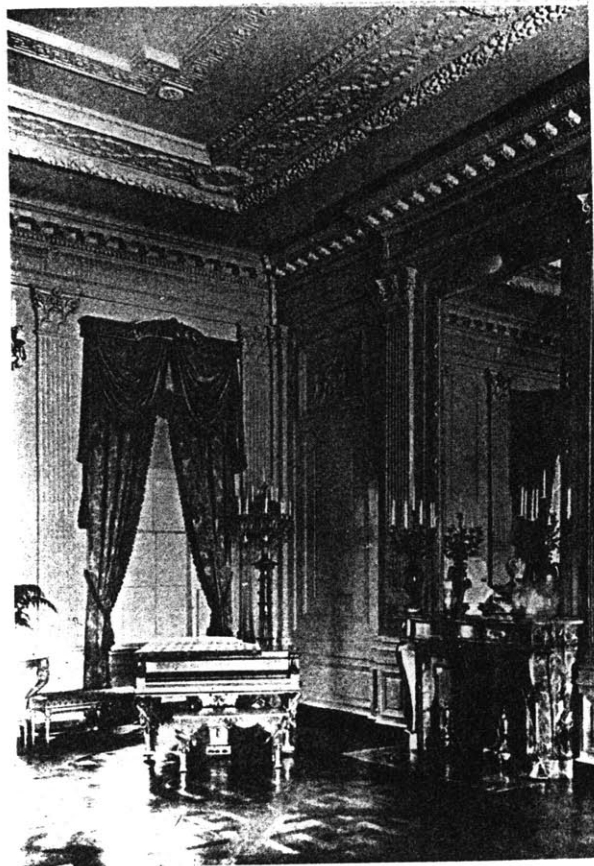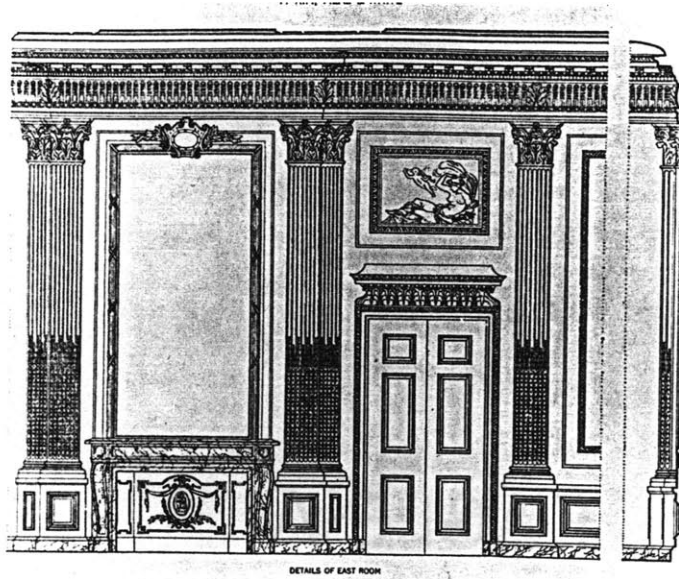
1.5b
The White House, elevation of East Room, (Leland Roth et al., Monograph of the Works of McKim, Mead and White, 1879-1915 (New York, 1977), pl. 178).
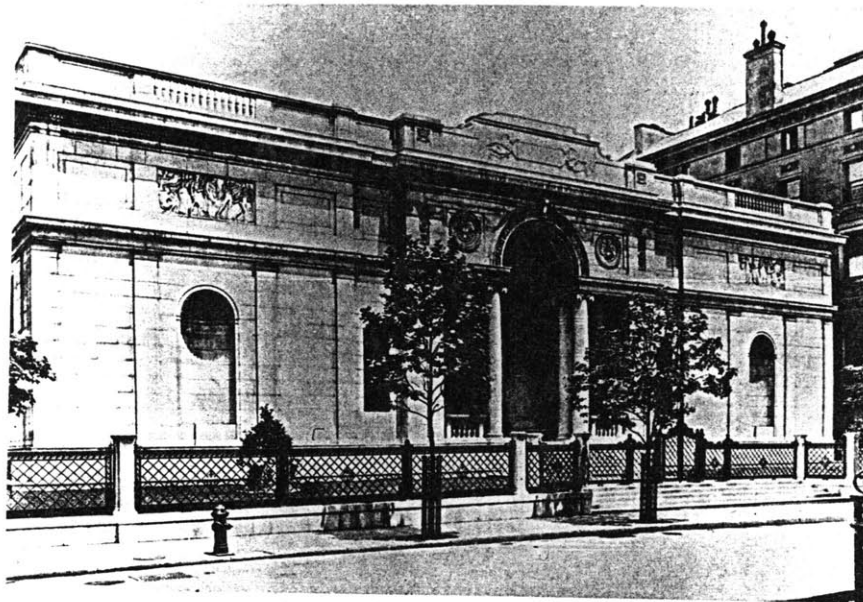
1.6
Library of J. Pierpont Morgan, New York City, NY, McKim, Mead and White, 1906 (Leland Roth et al., Monograph of the Works of McKim, Mead and White, 1879-1915 (New York, 1977), pl. 241).

1.7

World's Columbian Exposition,
Chicago, Ill, 1893, overall view
(Chicago Historical Society
reprinted in R. Reid Badger, The
Great American Fair: The World's
Columbian Exposition and American
Culture (Chicago, 1979)).

1.8

Administration Building, World's
Columbian Exposition, Chicago, Ill,
Richard Morris Hunt, 1893 (Chicago
Historical Society reprinted in R.
Reid Badger, The Great American
Fair: The World's Columbian
Exposition and American Culture
(Chicago, 1979)).
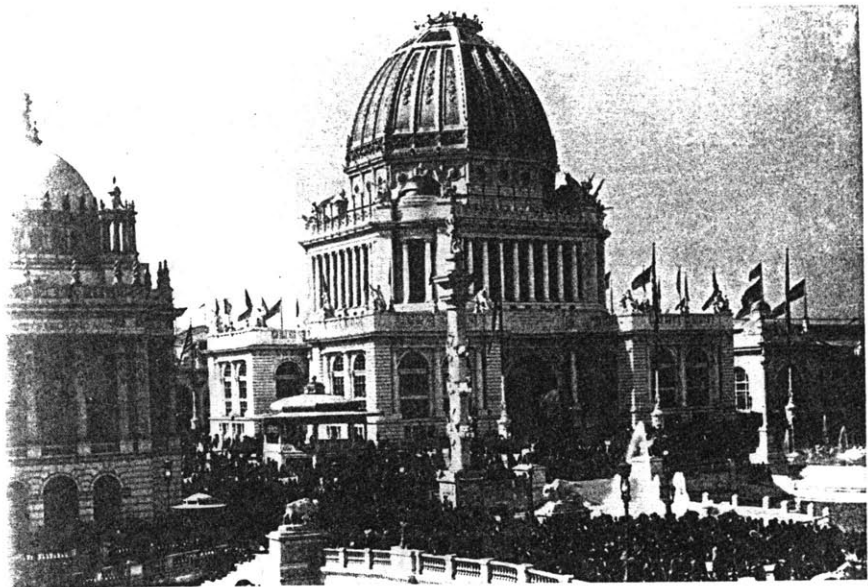
1.9

Triumphal Arch, World's Columbian
Exposition, Chicago, IL, McKim,
Mead and White, 1893 (Lois Craig et
al., The Federal Presence:
Architecture, Politics and Symbols in
United States Government Building
(Cambridge, MA, 1978)).
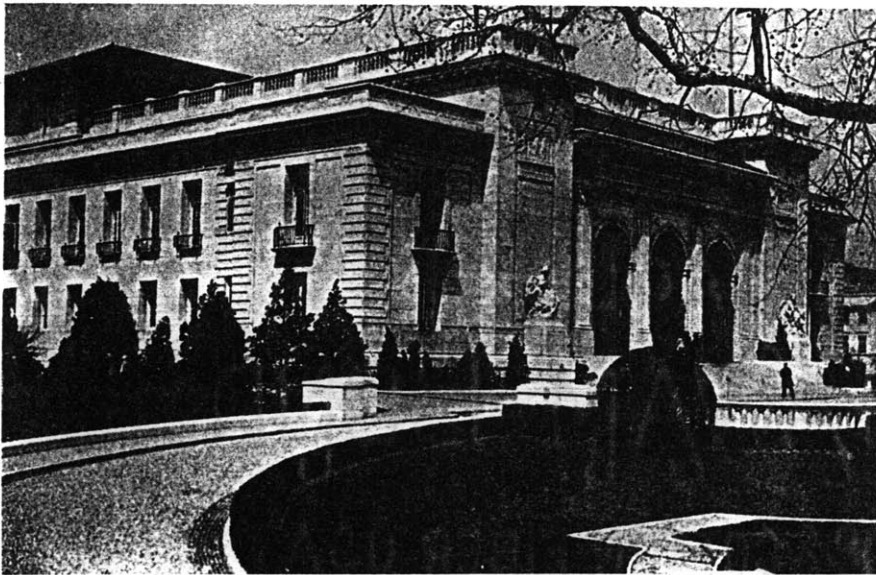
1.10

Pan American Union Building,
Washington DC, Paul Cret, 1907.
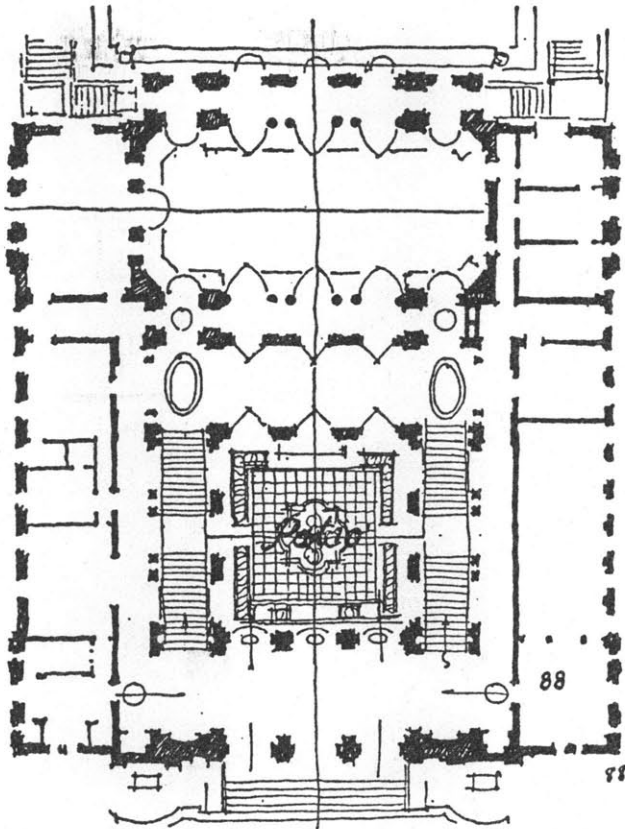
1.11
Pan American Building Union,
Washington DC, Paul Cret, 1907,
competition plan as illustrated in
N.C. Curtis, Architectural
Composition, (Cleveland, OH:1923),
fig.88)

1.12a
"A Yacht Club and Harbor," John
Wynkoop, Paris Prize Scholars in
Architecture, Second Paris Prize
Competition, 1905 (John Harbeson,
ed., Winning Designs: 1904-1927
Paris Prize in Architecture (New
York, 1928), pl. 2).
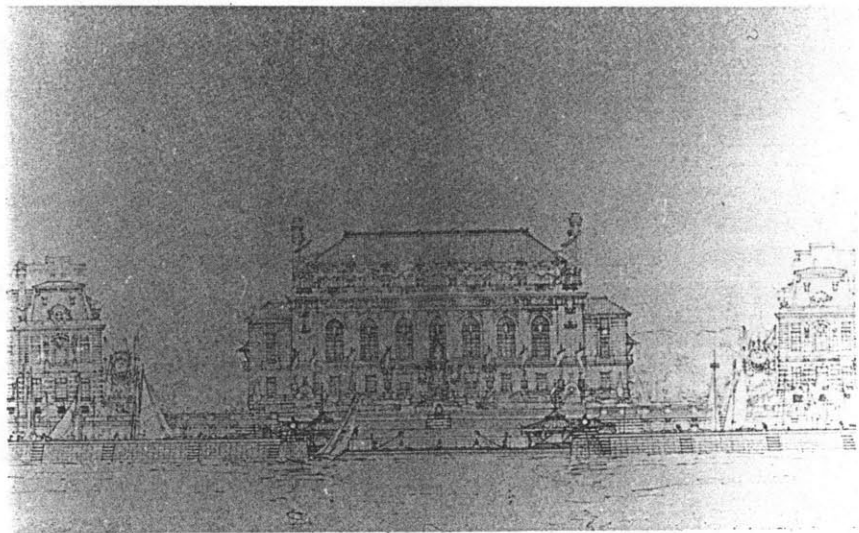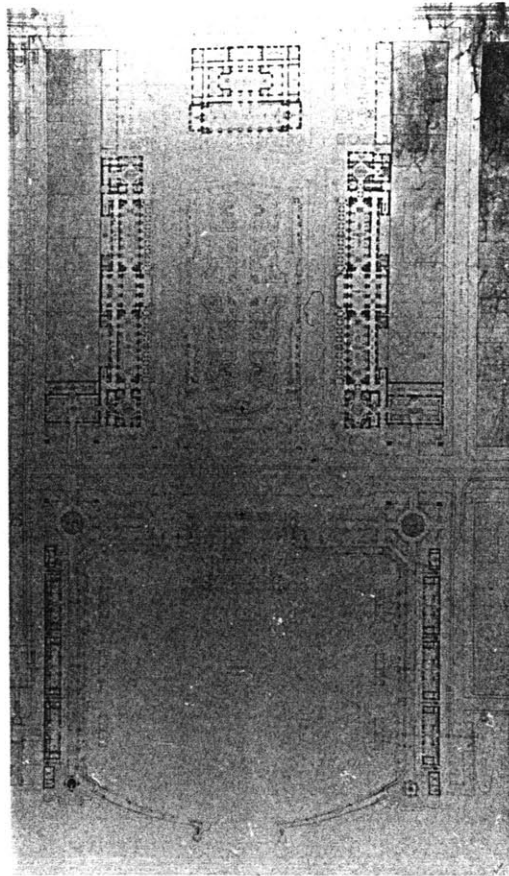
1.12b
"A Yacht Club," plan (John Harbeson, ed., Winning Designs: 1904-1927 Paris Prize in Architecture (New York, 1928), pl. 3).
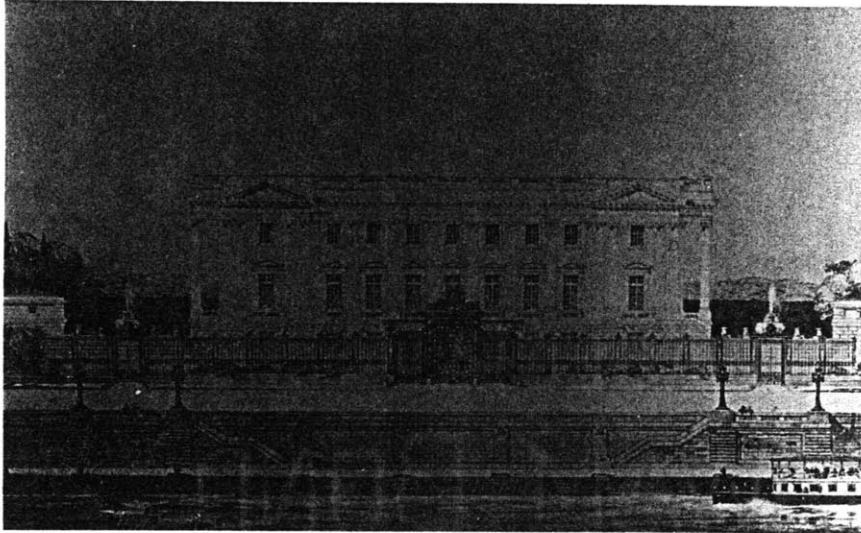
1.13a
"An Embassy for the United States in Paris," Douglas D. Ellington, Paris Prize Scholars in Architecture, Eighth Paris Prize Competition, 1911 (John Harbeson, ed., Winning Designs: 1904-1927 Paris Prize in Architecture (New York, 1928), pl. 12).
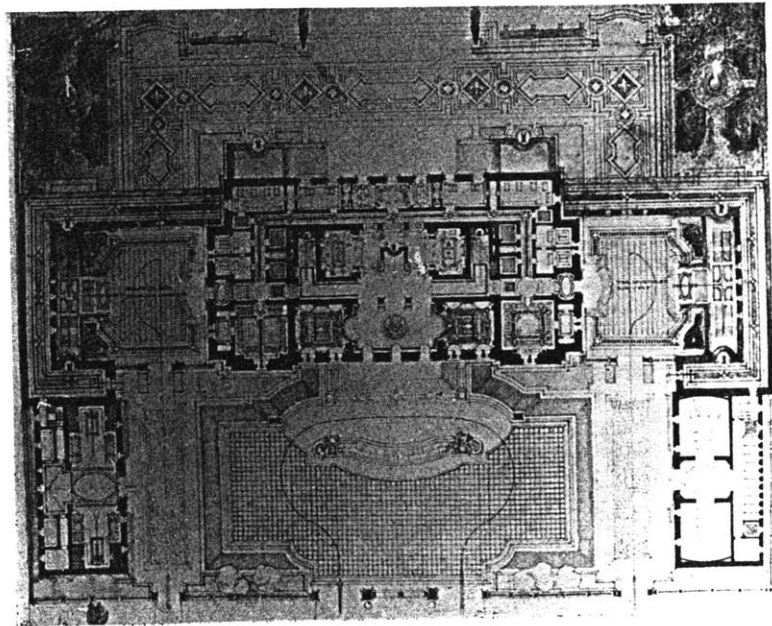
1.13b
"An Embassy," plan (John Harbeson, ed., Winning Designs: 1904-1927 Paris Prize in Architecture (New York, 1928), pl. 13).

1.14a
"A City Hall," Henry Sternfeld, Paris Prize Scholars in Architecture, Eleventh Paris Prize Competition, 1914 (John Harbeson, ed., Winning Designs: 1904-1927 Paris Prize in Architecture (New York 1928), pl. 18).

407
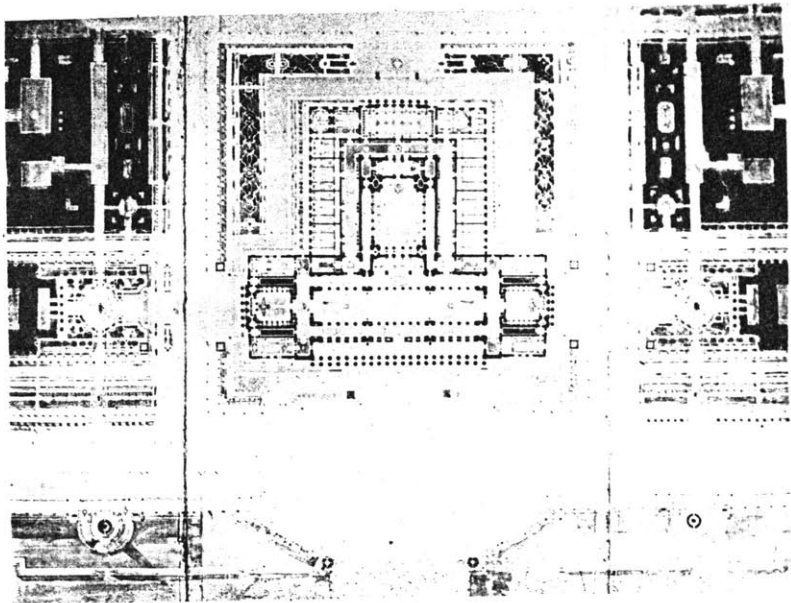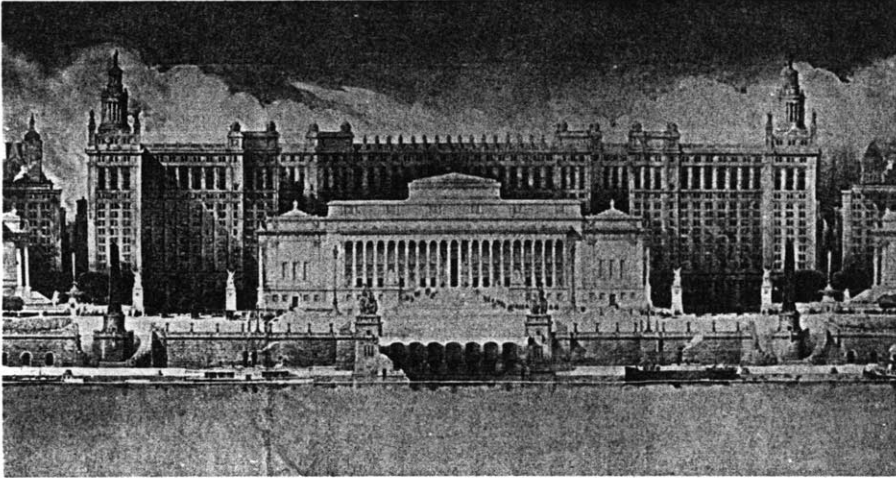
1.14b
"A City Hall," plan (John Harbeson, ed., Winning Designs: 1904-1927 Paris Prize in Architecture (New York 1928), pl. 19).
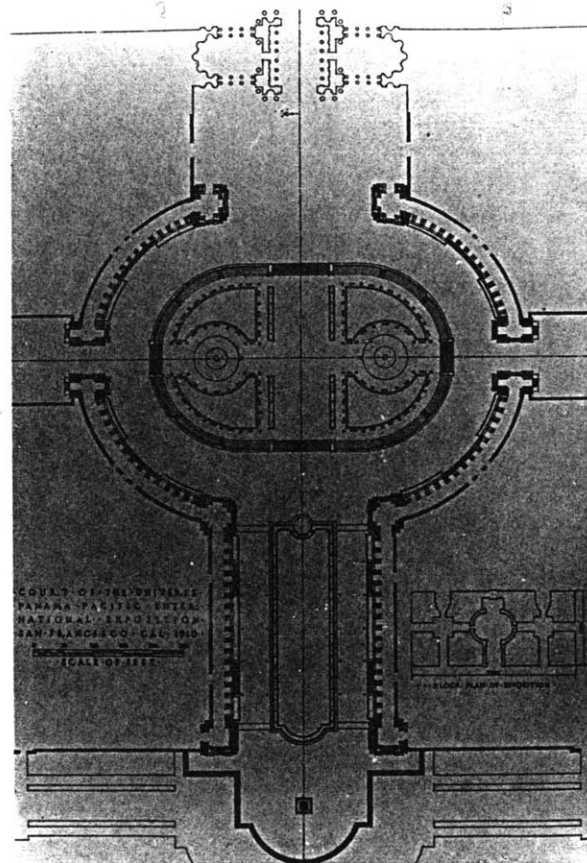
1.15a
Court of the Universe, Panama Pacific International Exposition, San Francisco, CA, McKim, Mead and White, 1915 (Leland Roth et al., Monograph of the Works of McKim, Mead and White, 1879-1915 (New York, 1977), pl. 386).

1.15b
Court of the Universe, plan (Leland
Roth et al., Monograph of the
Works of McKim, Mead and White,
1879-1915 (New York, 1977), pl.
384).

1.16
United States Military Academy,
West Point, NY, Cram, Goodhue
and Ferguson, 1903-10 (Charles
Whitaker, ed., Bertram Grosvenor
Goodhue - Architect and Master of
Many Arts (New York, 1925), pl.
15).
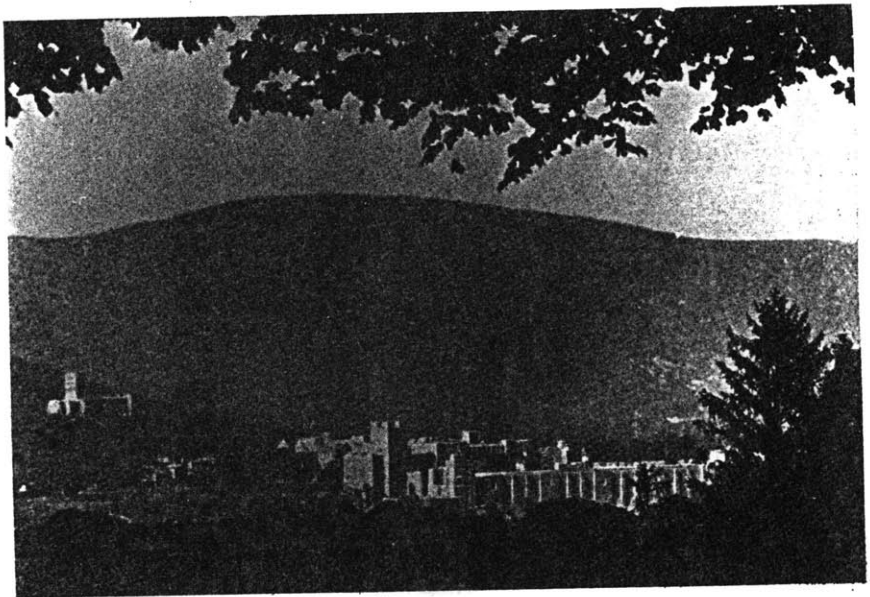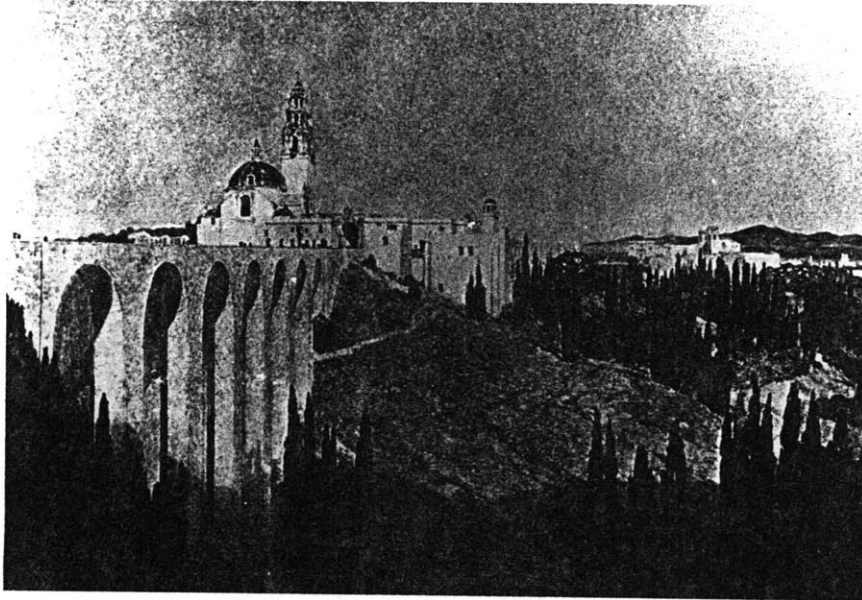
1.17a
Panama-California Exposition, San Diego, CA, Cram, Goodhue and Ferguson, 1911-15, competition rendering (Charles Whitaker, ed., Bertram Grosvenor Goodhue - Architect and Master of Many Arts (New York, 1925), pl. 121).

1.17b
California State Building, Panama-California Exposition (Charles Whitaker, ed., Bertram Grosvenor Goodhue - Architect and Master of Many Arts (New York, 1925), pl. 119).

PENCIL POINTS

Main Floor Plan. Imperial Hotel, Tokyo.
Frank Lloyd Wright, Architect.

1.18
Imperial Hotel, Tokyo, Frank Lloyd
Wright, 1916-22 (Louis Sullivan,
"Concerning the Imperial Hotel,
Tokyo, Japan," AR 53 (May 1923):
pp. 333-352.)

1.19
Imperial Hotel, plan (Louis Sullivan,
"Concerning the Imperial Hotel,
Tokyo, Japan," AR 53 (May 1923):
pp. 333-352.)
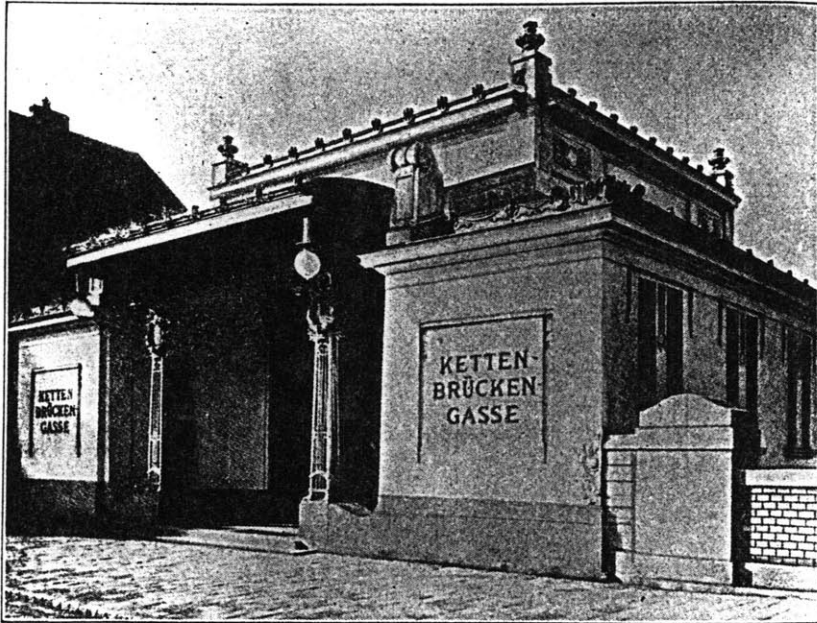
1.20
Ketten-Bruecke Station, Vienna,
Otto Wagner, 1894-1901 as
illustrated in Fiske Kimball and
George Edgell, A History of
Architecture (New York, 1918), fig.
280.
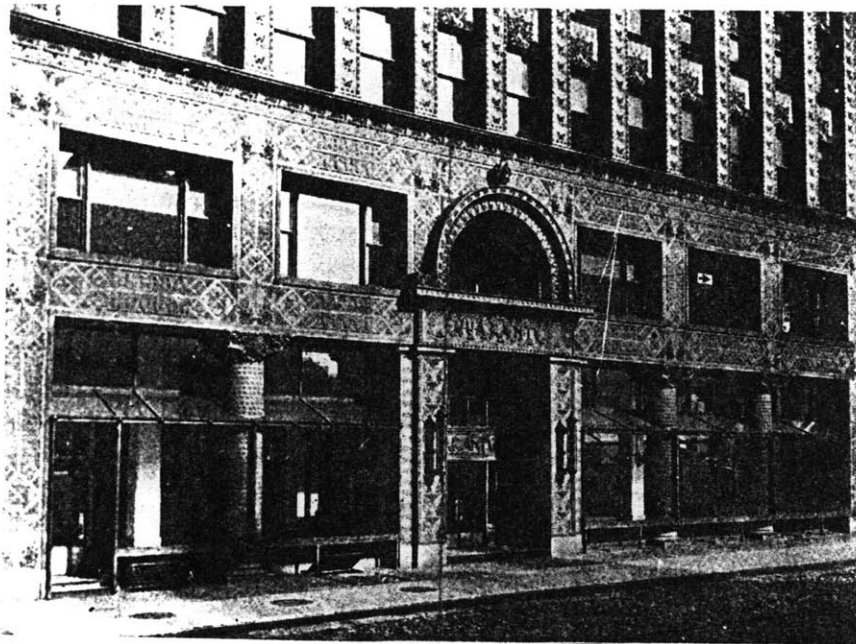
1.21
Guaranty Building, Buffalo, NY,
Louis Sullivan, 1894-6 as illustrated
in Fiske Kimball and George Edgell,
A History of Architecture (New
York, 1918), fig. 304.
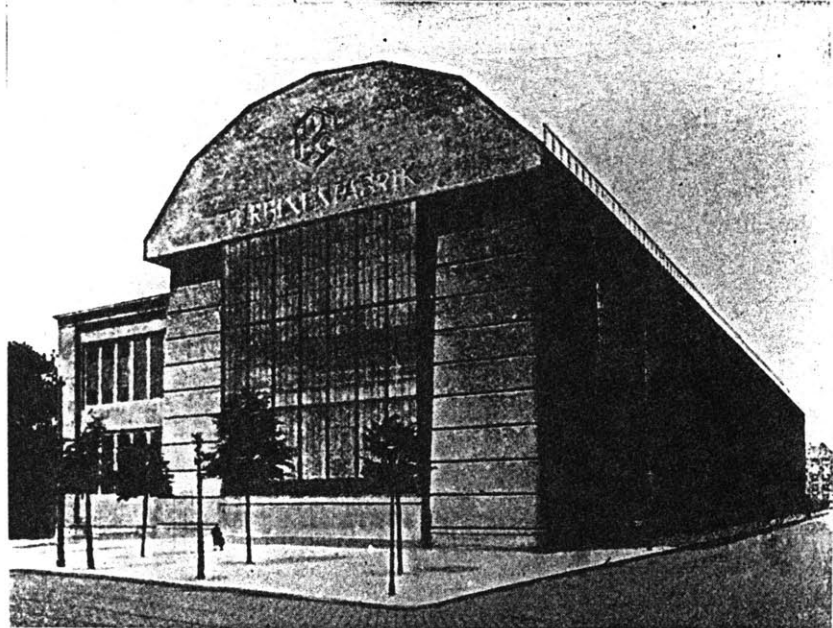
1.22
AEG Turbinen Fabrik, Berlin, Peter
Behrens, 1908-9 as illustrated in
Fiske Kimball and George Edgell, A
History of Architecture, (New York
1918), fig. 281.

1.23
Lincoln Memorial, Washington DC,
Henry Bacon, 1912-22 (Lois Craig et
al., The Federal Presence:
Architecture, Politics and Symbols in
United States Government Building
(Cambridge, MA, 1978), p. 260).
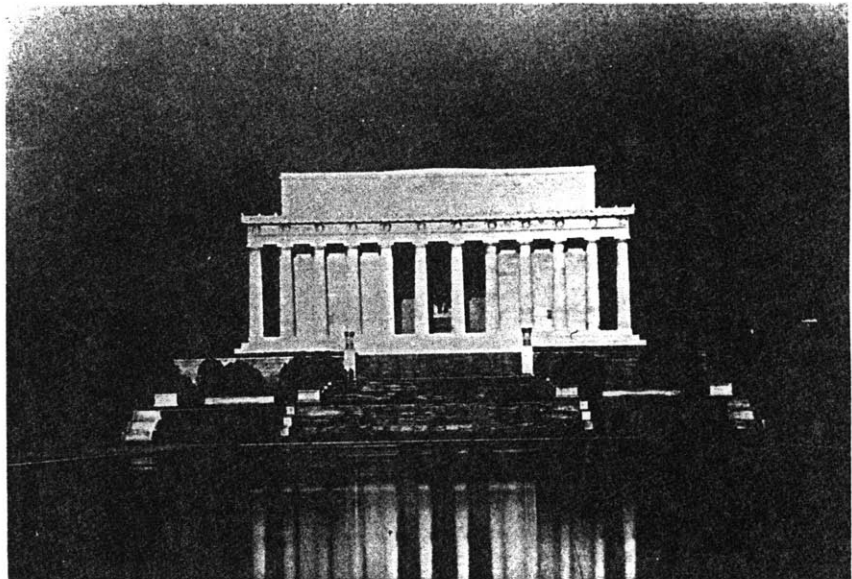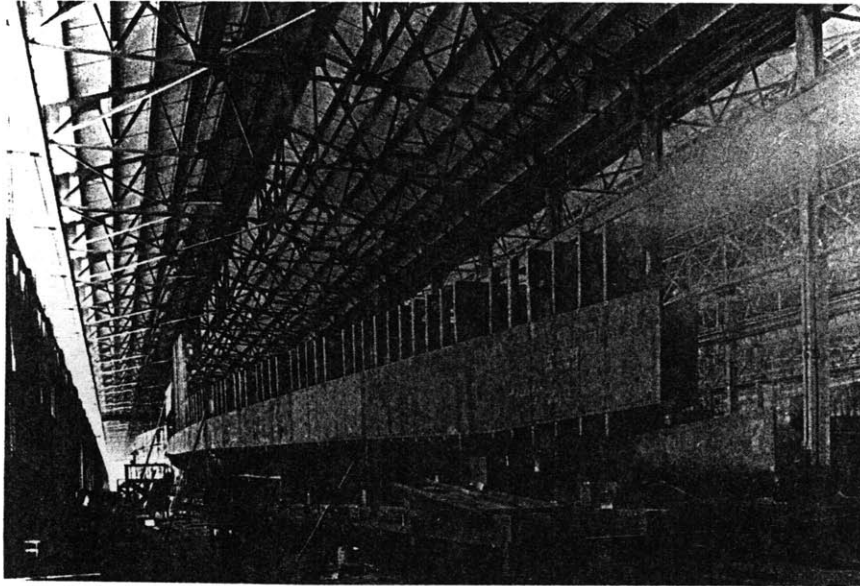
THE
JOURNAL
OF
THE AMERICAN INSTITUTE OF
ARCHITECTS

"To those who say
the war will bring no changes—
I say, God forbid!"

JANUARY
1919

2.1
Ford Eagle Plant, River Rouge, MI,
Albert Kahn, 1918 (Grant
Hildebrand, Designing for Industry:
the Architecture of Albert Kahn
(Cambridge, MA, 1974), fig. 33).

2.2
Cover, Journal of the American
Institute of Architects, 7 (January
1919).
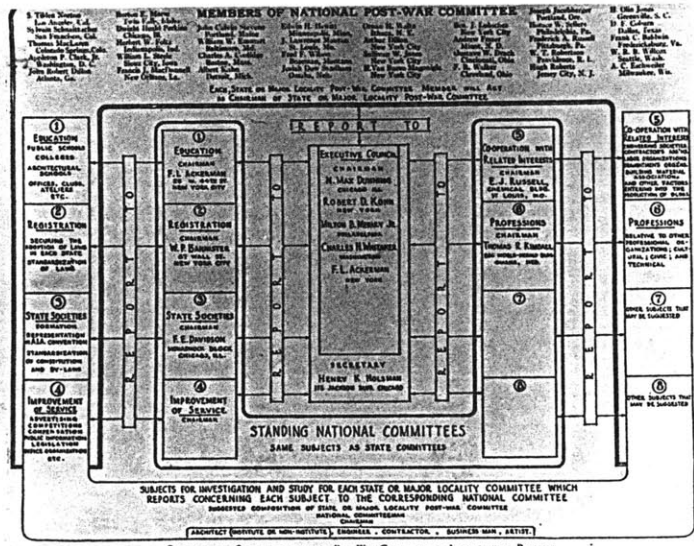
2.3
Chart of the Organization of the
Post-War Committee on
Architectural Practice (AIAJ 7
(December 1919): p. 529).

2.4
"Forms used in the Offices of Albert
Kahn, Architect" (George Baldwin,
"The Offices of Albert Kahn,
Architect, Detroit, Michigan," AF 29
(November 1918): p. 129).

2.5

"Pageant at the Lincoln Memorial," AIA Gold Medal Award Ceremony for Henry Bacon given by U.S. President Warren Harding, 1922 (AIAJ 11 (April 1923): p. 228).

2.6

Advertisement for Otis Elevator Company from D. Knickerbocker Boyd, ed., Structural Service Book Vol. I: A Revised Reprint from the Twelve Issues for 1917 of the Journal of the American Institute of Architects Structural Service Department (Washington DC, 1918).

2.7a

Advertisement for the Associated Metal Lath Manufacturers' Trade Association offers "service" to architects, from D. Knickerbocker Boyd, ed., Structural Service Book Vol. I: A Revised Reprint from the Twelve Issues for 1917 of the Journal of the American Institute of Architects Structural Service Department (Washington DC, 1918).

2.7b

Advertisement for the Associated Metal Lath Manufacturers' Trade Association, details, from D. Knickerbocker Boyd, ed., Structural Service Book Vol. I: A Revised Reprint from the Twelve Issues for 1917 of the Journal of the American Institute of Architects Structural Service Department (Washington DC, 1918).

Potential Power of Architects to Create Conditions Favoring Conservation

CONSERVATION now consumes the attention of the public—there is grave need of conservation of the food supply—feeding is as necessary as fighting to win the war.

Much food has been wasted by both feasting and fire. Mr. Hoover tells how to conserve the food supply by regulating consumption.

The National Board of Fire Underwriters (New York) tells how to conserve food and other things from waste by fire in "Safeguarding Industry—A War-Time Necessity," a book of common-sense rules for remedying conditions favoring the inception and spread of fire. The book is valuable to architects. A mere request will get a copy.

Six conditions favor inception and spread of fire, says the book:

(1) Disorder; (2) Ignorance and Carelessness; (3) Defective Equipment; (4) Faulty Construction; (5) Insufficient Protection; and (6) Lack of Defense.

Architects are mainly responsible for conditions three, four, and five. Though only half the number, they comprehend many more factors of safety than the others. Therefore the potential power of architects to create conditions favoring conservation.

The most vital condition concerns the control of fire. The book says:

Common sense will tell you that almost all fires have small beginnings, from which arises the old saying that the first five minutes in fighting a fire is worth more than the next five hours. This means that your means of extinguishing should be immediately accessible, in other words, that such means should be distributed throughout your premises so that at no point will they be far away. The most valuable of all devices for this purpose is the automatic sprinkler, which is too familiar to need description. It provides an immediate downpour of water at the exact place of the blaze, and generally extinguishes such a blaze at once. Insurance companies recognize this protection by making a large reduction in rates wherever buildings are well equipped with sprinklers.

Among "Practical Suggestions for Reducing Fire Loss" is this:

When properly installed, with an abundant and constant water supply at proper pressure, and the equipment maintained in a constantly operative condition, the automatic sprinkler has proven itself to be the most reliable and satisfactory fire extinguishing device in use, being suitable for effective service in practically every class of structure and under nearly any condition of fire hazard arising from causes incident to occupancy or processes. It is therefore urged that such protection be installed in every structure where the nature of the occupancy is not such as to render these devices inoperative or ineffective.

Today the design and equipment of buildings to resist and control fire is not only a practical necessity, but also a war-time necessity, and above all, A PATRIOTIC DUTY!

ARCHITECTS SHOULD EXERCISE THEIR POTENTIAL POWER NOW!

Information Service Department

National Automatic Sprinkler Association
80 MAIDEN LANE, NEW YORK, N. Y.
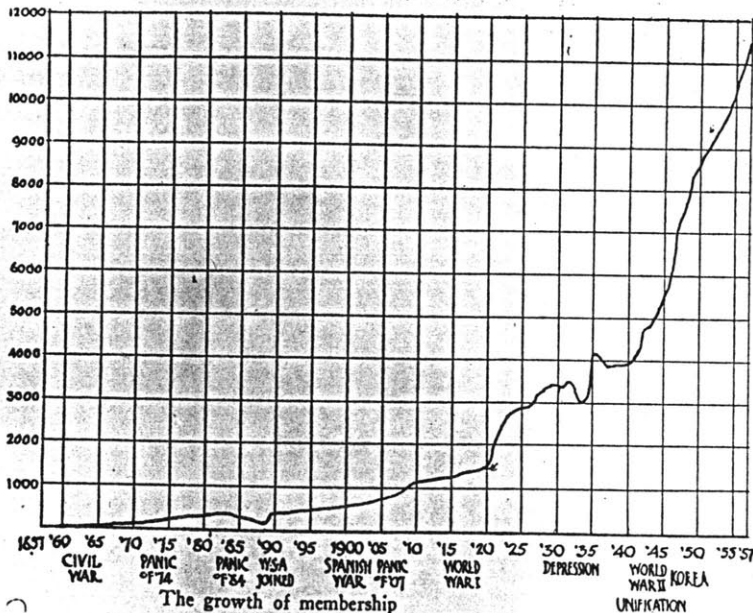
2.8

National Automatic Sprinkler Association promises that its members and their products will give "power" to architects, from D. Knickerbocker Boyd, ed., Structural Service Book Vol. I: A Revised Reprint from the Twelve Issues for 1917 of the Journal of the American Institute of Architects Structural Service Department (Washington DC, 1918).

2.9

Chart showing the growth of AIA membership, 1857 to 1957 (Henry Saylor, "The AIA's First 100 Years," AIAJ (May 1957), p. 30).
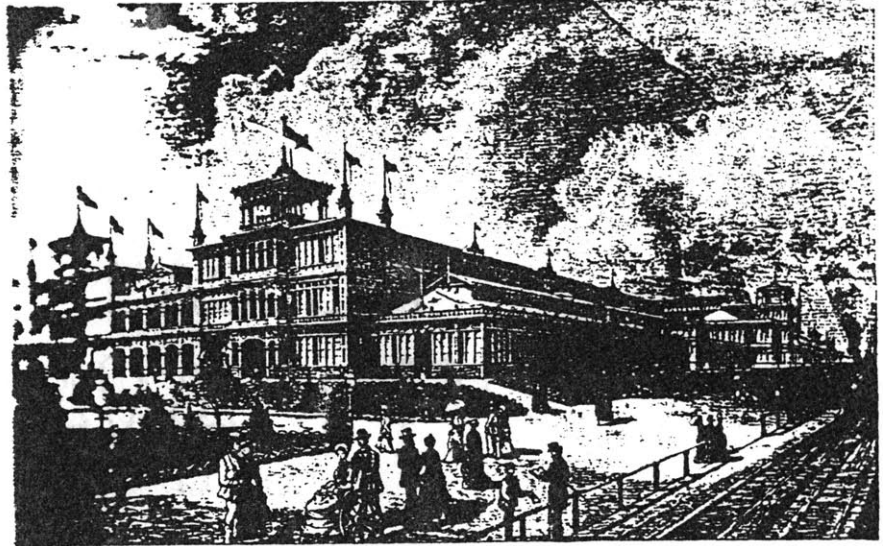
3.1
Machinery Hall at the U.S.
Centennial Exposition, Philadelphia,
PA, 1876. (William Starrett,
<u>Skyscrapers and the Men Who Build
Them</u> (New York, 1928), p. 15).
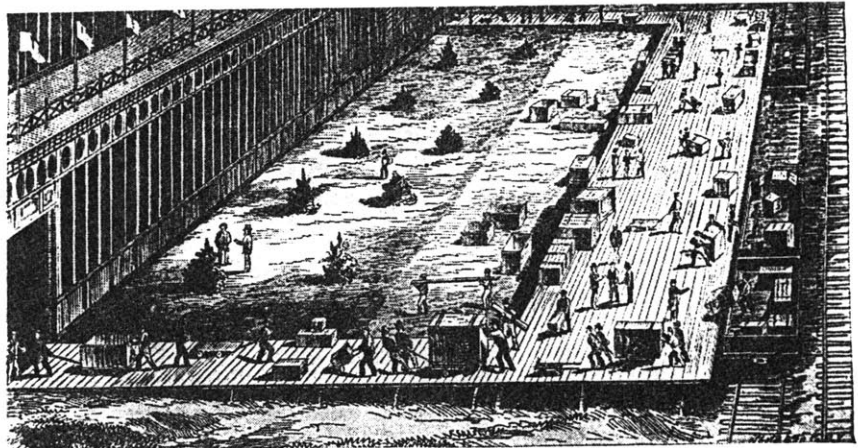
3.2
Freight Handling Terminal, U.S.
Centennial Exposition, Philadelphia,
PA, 1876. (William Starrett,
<u>Skyscrapers and the Men Who Build
Them</u> (New York, 1928)).

In 1876 this was the last word in a freight-handling terminal, as extolled by the management of the Centennial, which this terminal was built to serve.

419

3.3
Woolworth Building, New York, NY,
Cass Gilbert, 1910-13 (Robert Stern,
New York 1900: Metropolitan
Architecture and Urbanism, 1890-
1915 (New York 1983), p. 175).
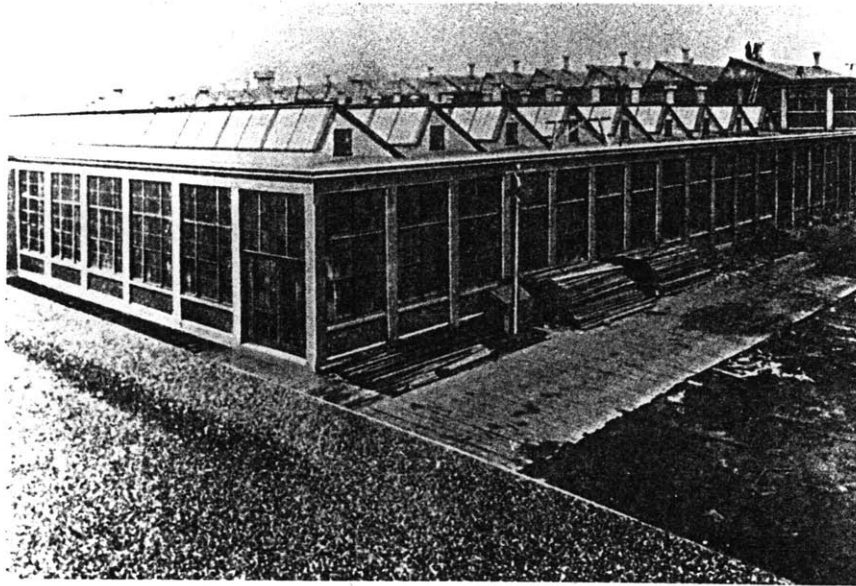
3.4
George Pierce Plant, Buffalo, NY,
Albert Kahn, 1906 (Grant
Hildebrand, Designing for Industry.
(Cambridge, MA, 1974)).

3.5
National City Bank, New York, NY,
original lower arcade by Isaiah
Rogers, 1836–41; reconstruction and
additions by McKim, Mead and
White, 1907 (Robert Stern, New
York 1900: Metropolitan
Architecture and Urbanism, 1890-
1915 (New York 1983), p. 185).

3.6
Prefabricated concrete panels used
in construction of Forest Hills
Gardens, Forest Hills, NY,
Grosvenor Atterbury, ca. 1913-18
(Thomas Adams and Edward
Bassett, Buildings: Their Uses and
the Spaces Around Them (New
York, 1931)).
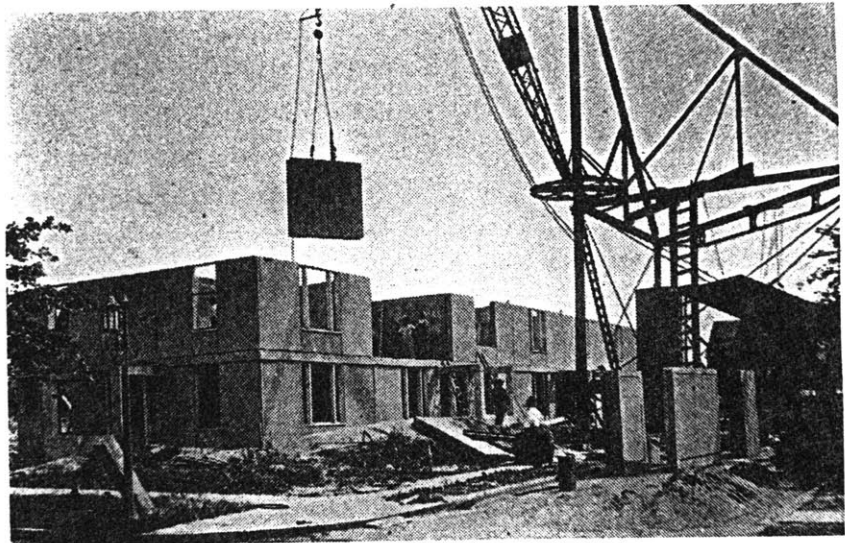
3.7
Ingalls Building, Cinncinati, OH,
Elzner and Anderson, 1902-3.
(Daniel Shodeck, <u>Landmarks in
American Civil Engineering</u>
(Cambridge, MA, 1987), p. 284).
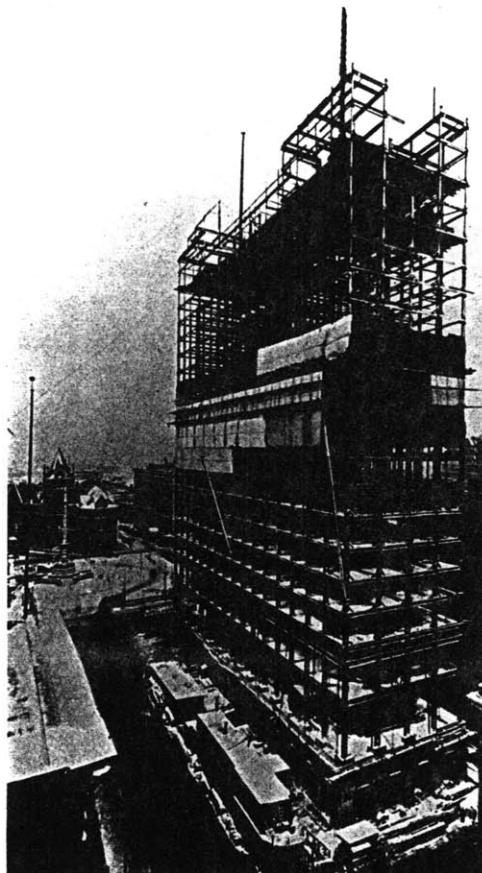
3.8
Liberty Bank Building, Buffalo, NY,
Alfred Bossom, ca.1913? (Alfred
Bossom, <u>Building to the Skies</u>
(London, 1934))
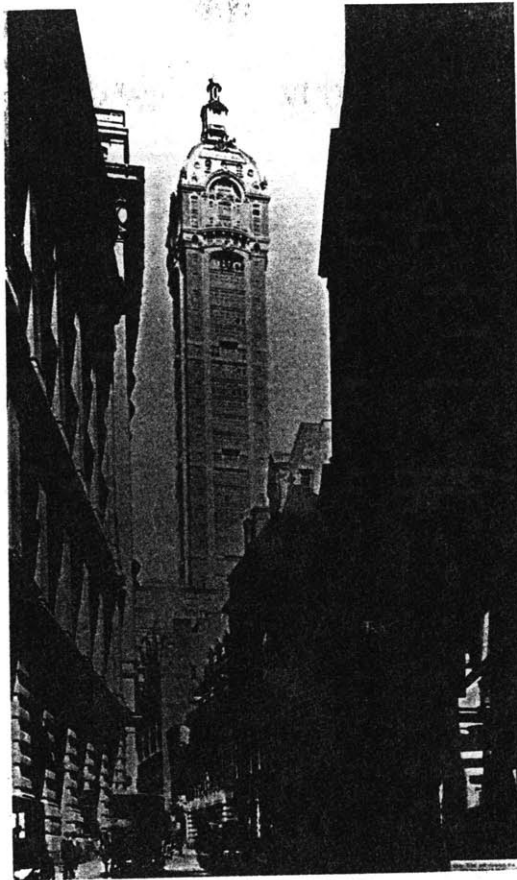
3.9
Singer Building, New York, NY,
Ernest Flagg, 1905-8 (Robert Stern,
New York 1900: Metropolitan
Architecture and Urbanism, 1890-
1915 (New York 1983), p. 170).

3.10
Equitable Building, New York, NY,
Graham, Anderson, Probst and
White, 1915 (William Starrett,
Skyscrapers and the Men Who Build
Them (New York, 1928)).
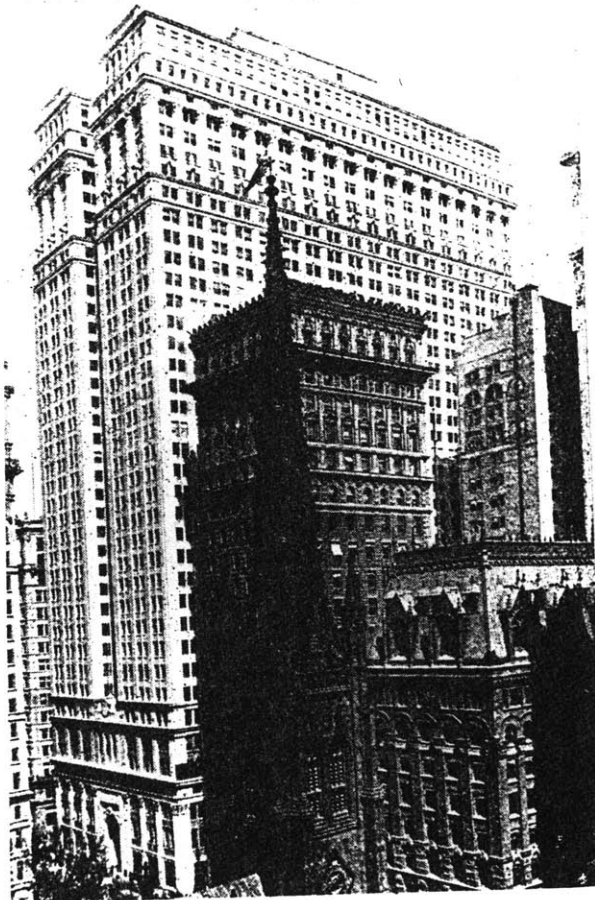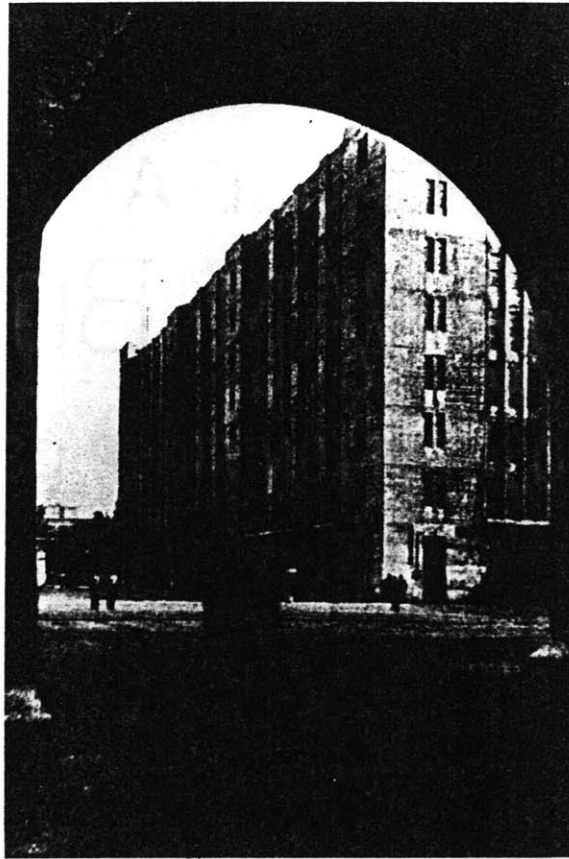
3.11
U.S. Army Supply Base, Brooklyn,
NY, Cass Gilbert, ca. 1917 (Arthur
McEntee, "Recent Developments in
the Architectural Treatment of
Concrete Industrial Buildings," <u>Arch</u>
43 (January 1921): p. 18).

3.12
Atlantic Corporation Shop Building,
Portsmouth, NH, Lockwood, Greene
and Company, 1917-18. (Richard
Candee, <u>Atlantic Heights: A World
War I Shipbuilder's Community</u>
(Portsmouth, NH, 1985)).
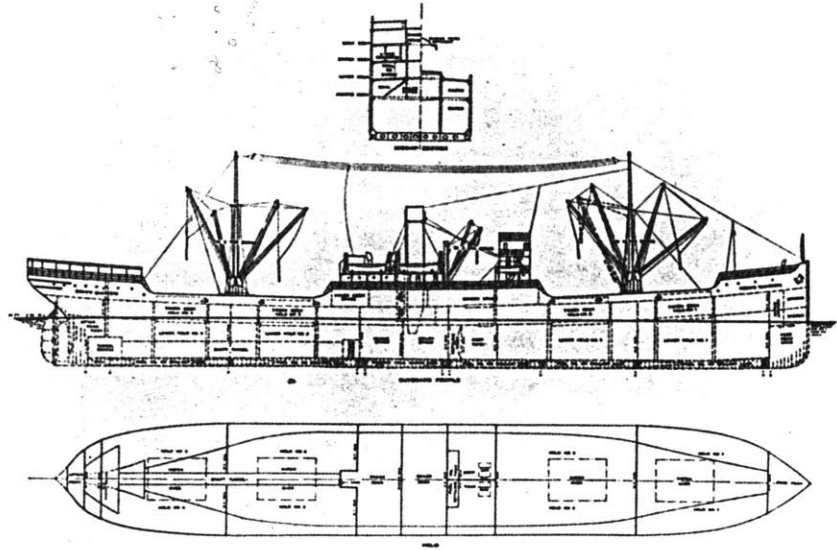
3.13

Plan and section of freighter
approved by Emergency Fleet and
built at Atlantic Corporation, 1918.
(Richard Candee, <u>Atlantic Heights:
A World War I Shipbuilder's
Community</u> (Portsmouth, NH,
1985)).

3.14

Description of terminology used by
U.S. Housing Corporation (U.S.
Department of Labor, <u>Report of the
United States Housing Corporation</u>,
vol. II (Washington DC, 1919)).

EXPLANATION OF NAMES OF HOUSE TYPES.

To insure uniformity in nomenclature of house types in the report the following names have been adopted (matter in parenthesis is explanatory only and not intended as precise definition):
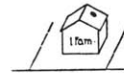
Detached house.—(The "single house," one family in a building.)
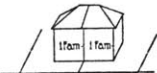
Semidetached house.—(A one-family house having one party wall only in common with an adjacent house. Each half of the building is a "Semidetached house," the whole building is a pair of semidetached houses.)
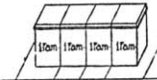
Row house.—(A one-family house attached with two or more others to form a continuous row or group in which the several houses are separated from adjacent houses by party walls.) This type may be divided according to location in the group or row into: *Row end houses* and *row inside houses.*

Detached two-flat house.—(The "duplex house," two families in a building, one over the other.)
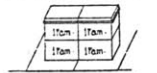
Semidetached two-flat house.—(A two-flat house having one party wall only in common with an adjacent house; normally one-half of a building containing four families, one in each story in each half.)
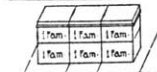
Row two-flat house.—(A two-flat house attached with two or more others to form a continuous row or group, in which the several houses are separated from adjacent houses by party walls.) This type may be divided according to location in the group or row into: *Row end two-flat houses,* and *row inside two-flat houses.*
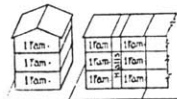
Apartment house.—(The "tenement house," containing three or more families, normally one or more families on each of three or more stories, served by a common hall or stairs.)

FRONT ELEVATION   SCALE 10 20 30 FEET   FRONT ELEVATION
                                                      ALTERNATE DESIGN
                                                      PLAN REVERSED

FLOOR PLAN

FIVE ROOM BUNGALOW   U S H C   STANDARD TYPE E
SCALE 5 10 15 20 25 FEET

FRONT ELEVATION   SIDE ELEVATION   FRONT ELEVATION   SIDE ELEVATION   FRONT ELEVATION
WITH REARRANGEMENT OF   WITH REARRANGEMENT OF   ALTERNATE DESIGN   ALTERNATE DESIGN
PORCH AND ENTRANCE   PORCH AND ENTRANCE   REARRANGEMENT OF   REARRANGEMENT OF
PLAN REVERSED   PORCH AND ENTRANCE PORCH AND ENTRANCE

PLAN SHOWING REARRANGEMENT
OF PORCH AND ENTRANCE

FLOOR PLAN

FOUR ROOM BUNGALOW   U S H C   STANDARD TYPE A
SCALE 5 10 15 20 25 FEET

UNITED   STATES   HOUSING   CORPORATION

FIRST FLOOR PLAN   SECTION   SECOND FLOOR PLAN

SIX ROOM ROW HOUSES   TYPE 301 P
SCALE   FEET

UNITED   STATES   HOUSING   CORPORATION
DEVELOPMENT AT ERIE PA
ARCHITECT   ALBERT H SPAHR

3.15

Standard Plan of Four Room
Bungalow recommended by the U.S.
Housing Corporation (U.S.
Department of Labor, Report of the
United States Housing Corporation,
vol. II (Washington DC, 1919)).

3.16

Six Room Row House for the U.S
Housing Corporation development
at Erie, PA. Albert Spahr, 1918.
(U.S. Department of Labor, Report
of the United States Housing
Corporation, vol. II (Washington
DC, 1919)).

203 P   203 P REVERSE

SECTION

FIRST FLOOR PLAN   SECOND FLOOR PLAN

SIX ROOM SEMI-DETACHED HOUSES   TYPES 203 P

SCALE _ _ _ _ _ FEET

UNITED STATES HOUSING CORPORATION
DEVELOPMENT AT ERIE P.A
ARCHITECT   ALBERT H SPAHR
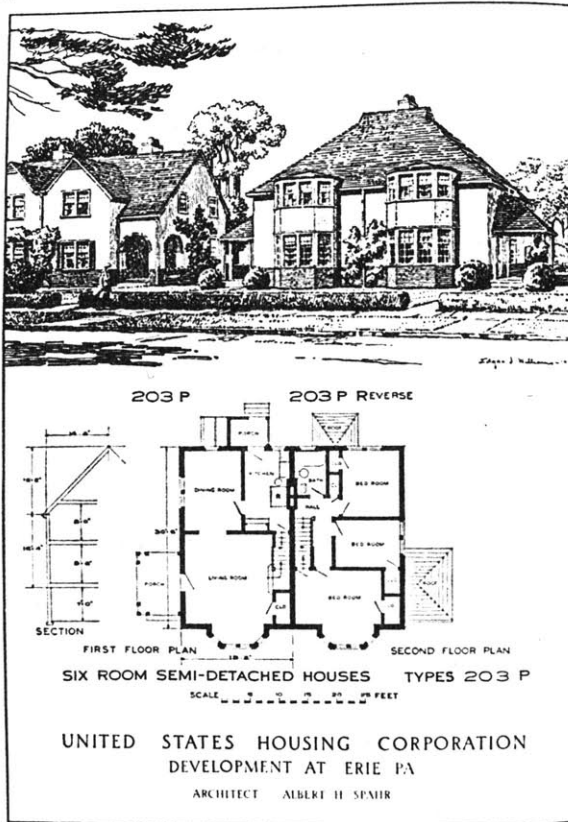
3.17

Six Room Semi-Detached House for the U.S. Housing Corporation development at Erie, PA., Albert Spahr, 1918. (U.S. Department of Labor, Report of the United States Housing Corporation, vol. II (Washington DC, 1919)).

3.18

Housing at Nitro, WV, Graham, Anderson, Probst and White, 1918 (Southern Pine Association, Homes for Workmen (New Orleans, 1919), pp. 78-80).

Sectional Houses Piled on the Ground Ready for Erection

427
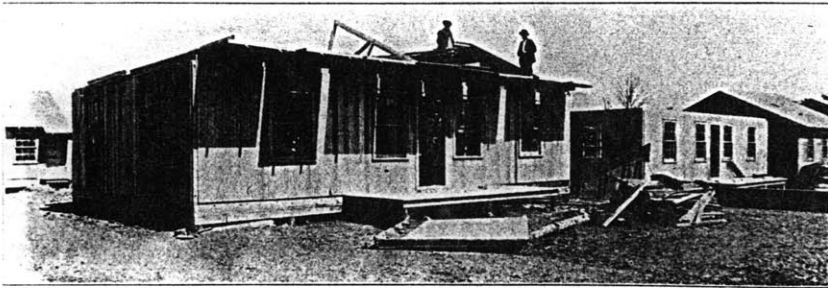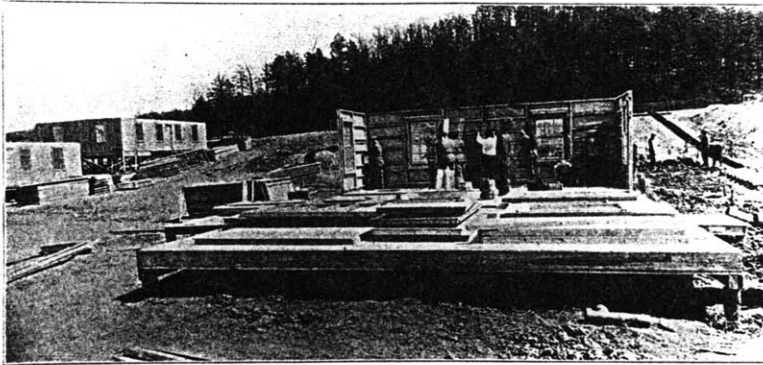
Walls Erected on Sectional Houses

3.19
Housing at Nitro, WV, Graham, Anderson, Probst and White, 1918 (Southern Pine Association, Homes for Workmen (New Orleans, 1919), pp. 78-80).

3.20
Housing at Nitro, WV, Graham, Anderson, Probst and White, 1918 (Southern Pine Association, Homes for Workmen (New Orleans, 1919), pp. 78-80).
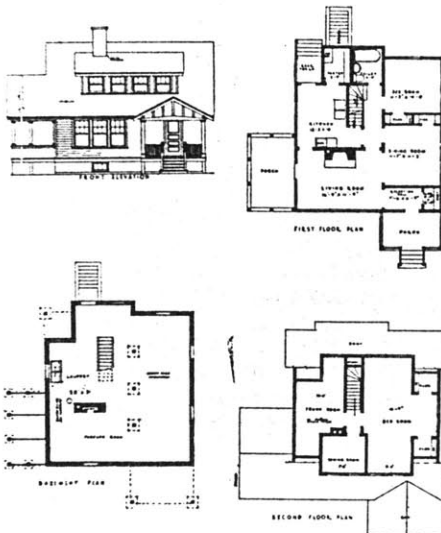
Six-room Residence, Elevation, Floor and Basement Plans
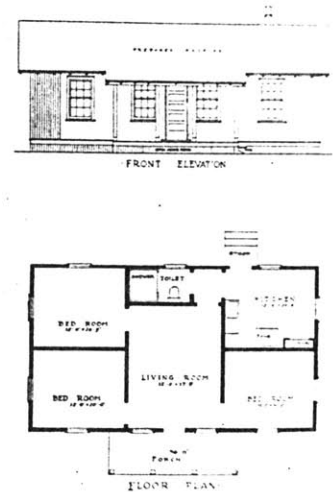
Five-room Bungalow for Unskilled American Labor

3.21

Housing at Nitro, WV, Graham, Anderson, Probst and White, 1918 (Southern Pine Association, <u>Homes for Workmen</u> (New Orleans, 1919), pp. 78-80).

3.22

Advertisement for Hegeman-Harris Construction Company celebrating their work on federally supported housing at Cradock, VA and Truxton, VA during WW (William Comstock, <u>The Housing Book</u> (New York, 1919)).

429

Designed by Electus D. Litchfield, Architect

YORKSHIP VILLAGE

CAMDEN, NEW JERSEY

A Town for a Population of Ten Thousand

Including Apartments, Hotels, Schools, Stores, Theatre, Bank, Garages, and
Social Improvement Buildings

This work was started May 20th, 1918, and
completed at the average rate of a finished
house every two hours. Refer to pages 71 to
78 for examples of the houses erected.

Constructed by

Tide-Water Building Company

GENERAL CONTRACTORS

16 East 33rd Street, New York

A. MILTON NAPIER, President
H. STEVENSON, Vice-President

J. P. RANNEY, Secretary-Treasurer
E. W. HAMMER, General Superintendent
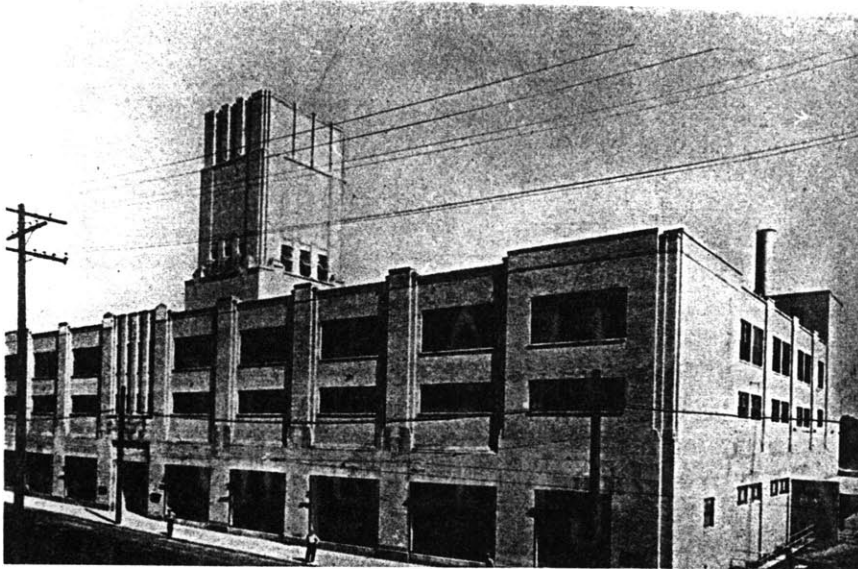
3.23

Advertisement for the Tide-Water
Building Company celebrating their
work on federally supported housing
at Yorkship Village at Camden, NJ
during WW I. (William Comstock,
The Housing Book (New York,
1919)).

3.24

Sears Roebuck & Company,
Milwaukee, WI, Nimmons, Carr and
Wright, 1928 (AF 51 (1929): p. 305).
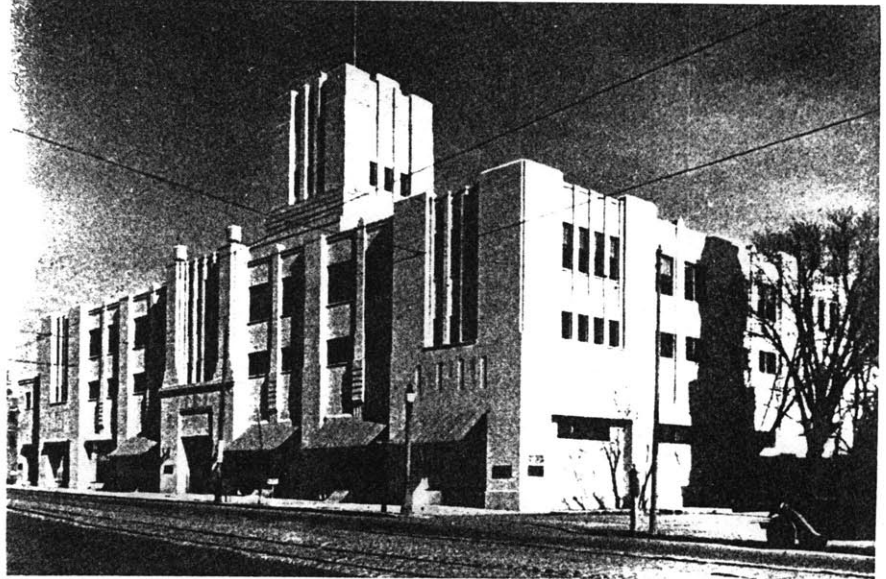
3.25
Sears Roebuck & Company,
Cambridge, MA, Nimmons, Carr
and Wright, 1928 (AF 51 (1929): p.
305).

3.26
Sears Roebuck & Company,
Philadelphia, PA, Nimmons, Carr
and Wright, ca. 1928 (AF 51 (1929):
p. 314).

3.27
Sears Roebuck & Company,
Minneapolis, MN, Nimmons, Carr
and Wright, ca. 1928 (AF 51 (1929):
p. 315).
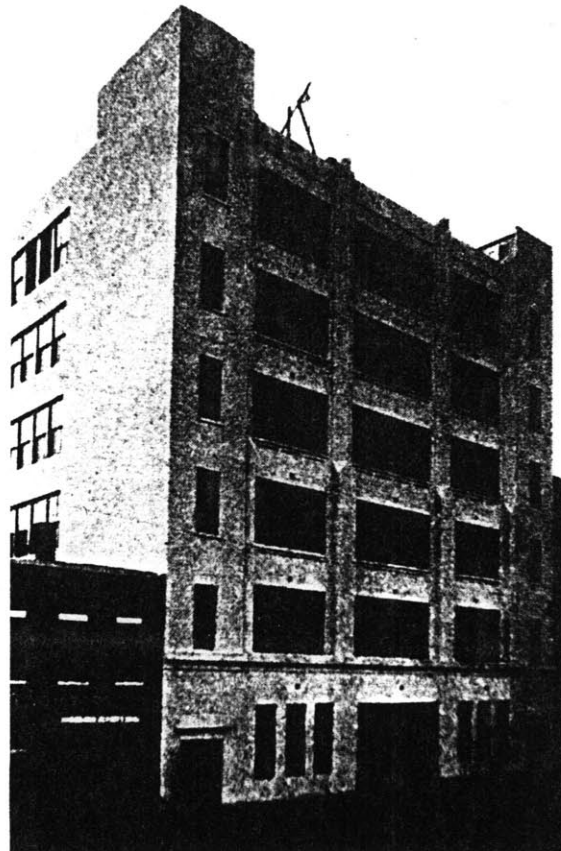
3.28
Ragney & Company Building,
Brooklyn, NY, Helmle and Corbett,
ca. 1917 (Arthur McEntee, "Recent
Developments in the Architectural
Treatment of Concrete Industrial
Buildings," Arch 43 (January 1921):
p. 18).
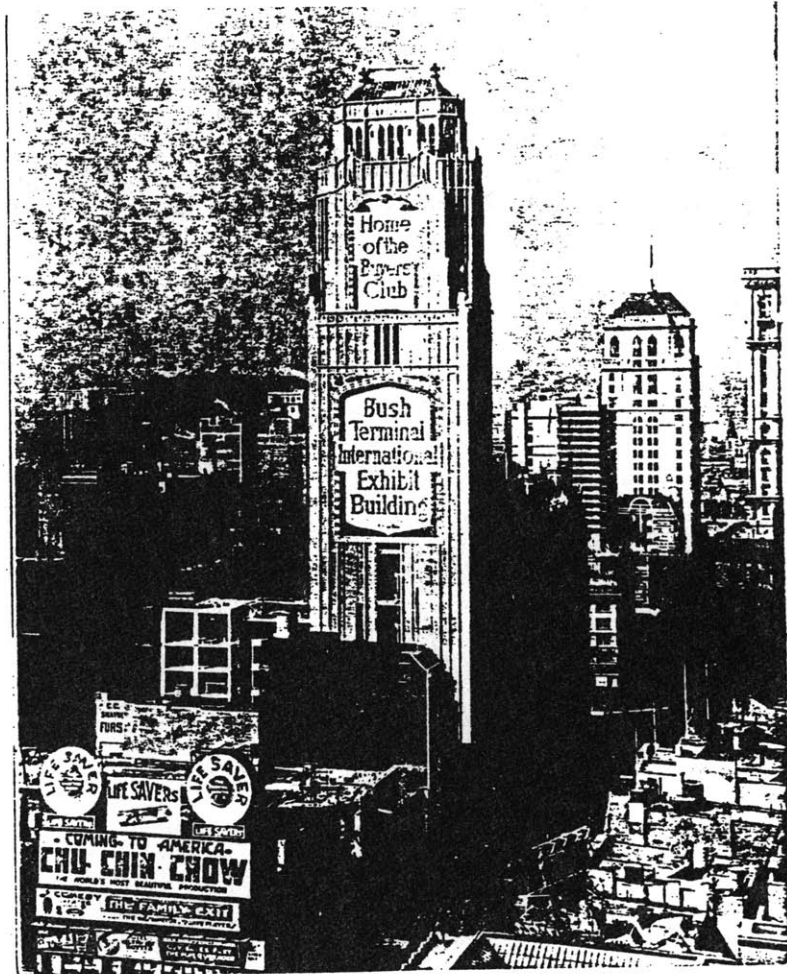
3.29
Bush Terminal Building, New York, NY, Helmle and Corbett, 1916-17 (Special Collections, Avery Library, Columbia University).

3.30
Phase One in Hugh Ferriss' depiction of the design process engaged in by an architect performing under the constraints of the New York Zoning Ordinance and the demands of investors seeking to maximize the return on their investments in commercial highrise construction (Harvey Wiley Corbett, "Zoning and the Envelope of the Building," PP 4 (January 1923):pp. 15-17).
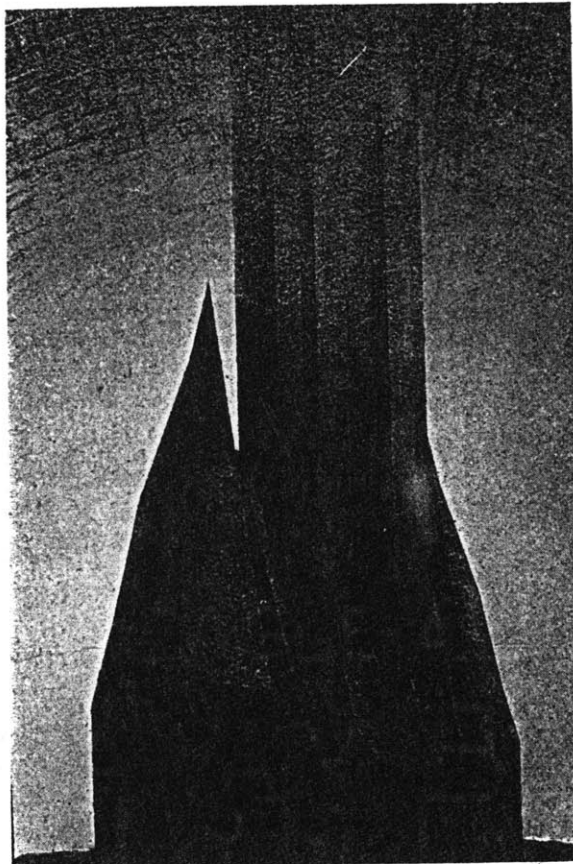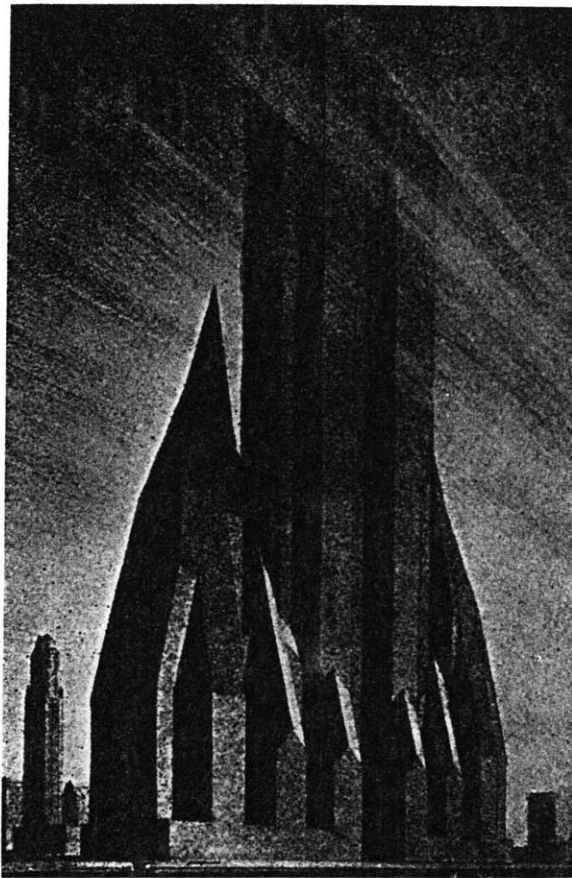
3.31
Phase Two in Hugh Ferriss depiction
(Harvey Wiley Corbett, "Zoning and
the Envelope of the Building," PP 4
(January 1923):pp. 15-17).
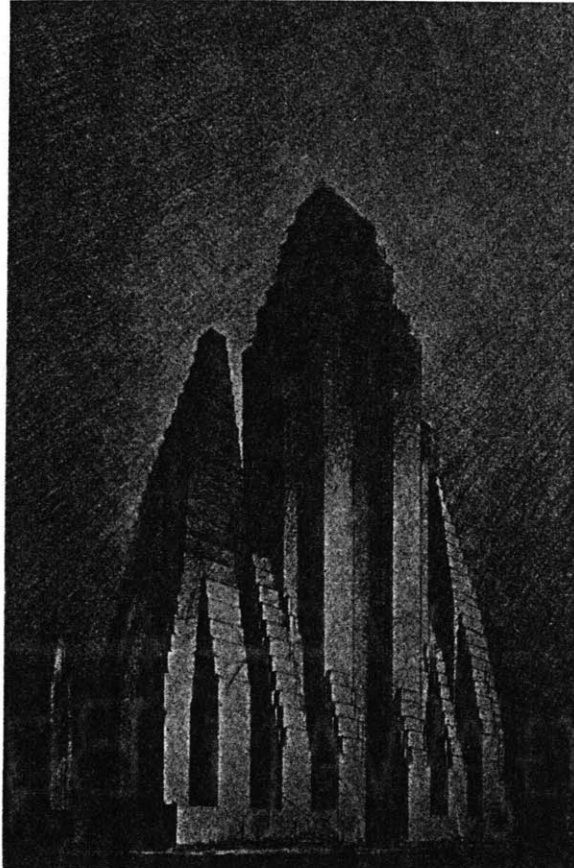
3.32
Phase Three in Hugh Ferriss
depiction (Harvey Wiley Corbett,
"Zoning and the Envelope of the
Building," PP 4 (January 1923):pp.
15-17).
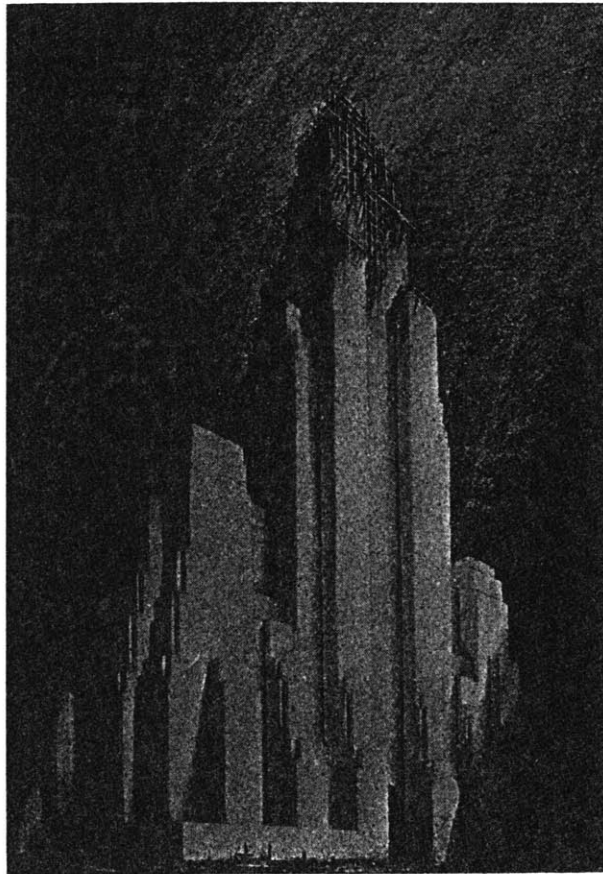
3.33
Phase Four in Hugh Ferriss
depiction (Harvey Wiley Corbett,
"Zoning and the Envelope of the
Building," PP 4 (January 1923):pp.
15-17).

3.34
"Final Stage" in Hugh Ferriss
depiction (Harvey Wiley Corbett,
"Zoning and the Envelope of the
Building," PP 4 (January 1923):pp.
15-17).

435
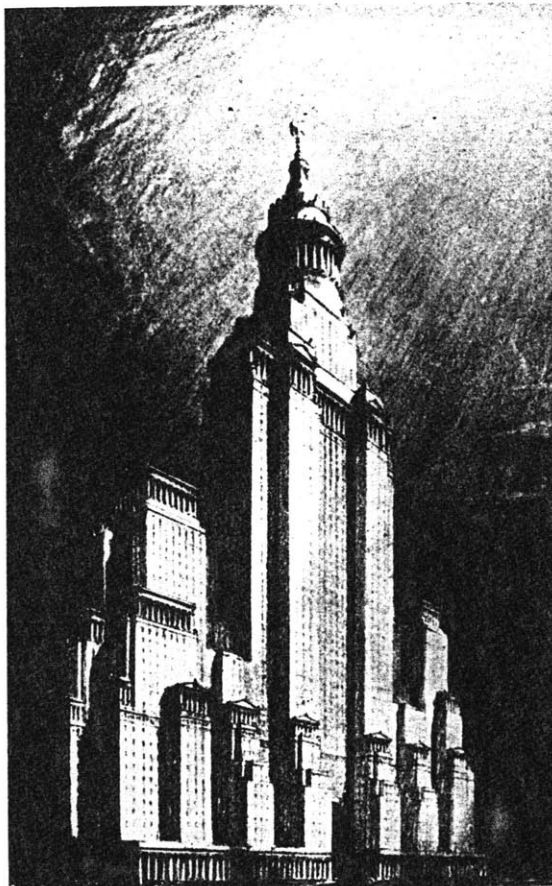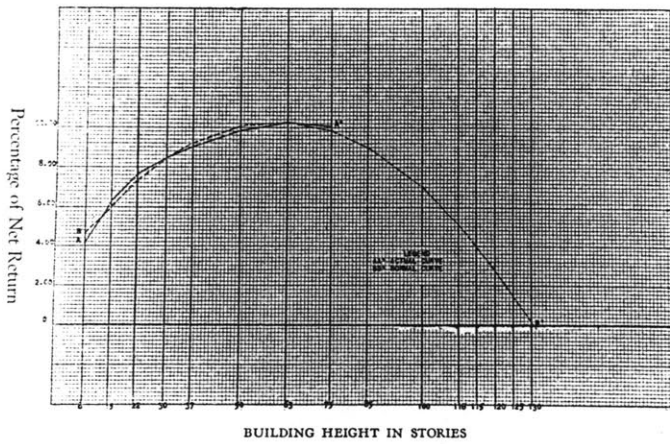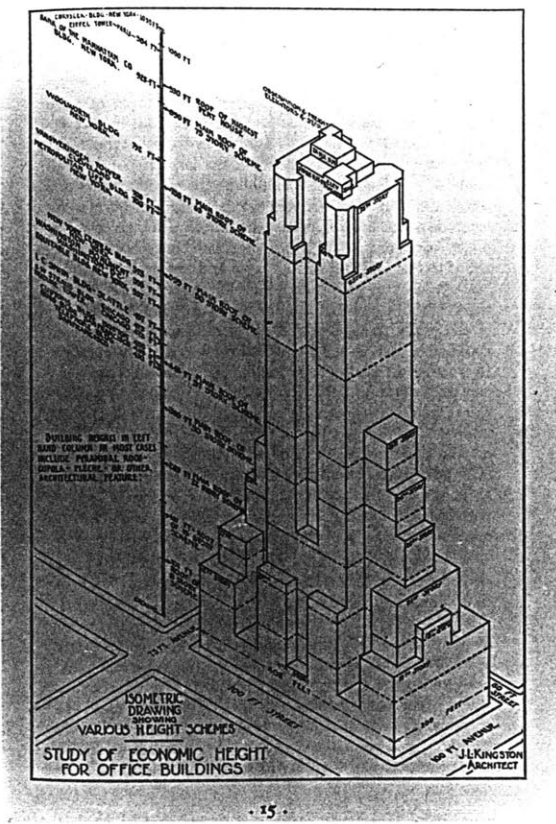
3.35
"Study of Economic Height of Office Buildings." (W.C. Clark and J.L. Kingston, The Skyscraper: A Study in the Economic Height of Modern Office Buildings (New York, 1930)).

3.36
Graph plotting relationship between building height and net return on investment. (W.C. Clark and J.L. Kingston, The Skyscraper: A Study in the Economic Height of Modern Office Buildings (New York, 1930)).

3.37
Project for a skyscraper in the
Friedrichstrasse, Berlin, Hans
Poelzig, ca. 1923 illustrated in Walter
Curt Behrendt, "Skyscrapers in
Germany," AIAJ 11 (September
1923): pp. 365-70.

3.38
"Project for a skyscraper in iron and
glass," Mies van der Rohe, ca. 1923,
plan illustrated in Walter Curt
Behrendt, "Skyscrapers in Germany,"
AIAJ 11 (September 1923): pp. 365-
70.
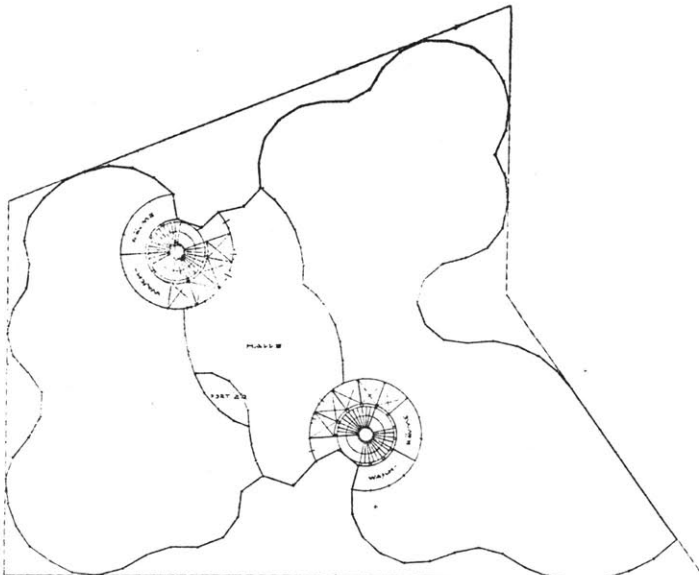
FIGURE 6—PROJECT FOR A SKYSCRAPER OF IRON AND GLASS   *Architect, L. Mies van der Rohe, Berlin*
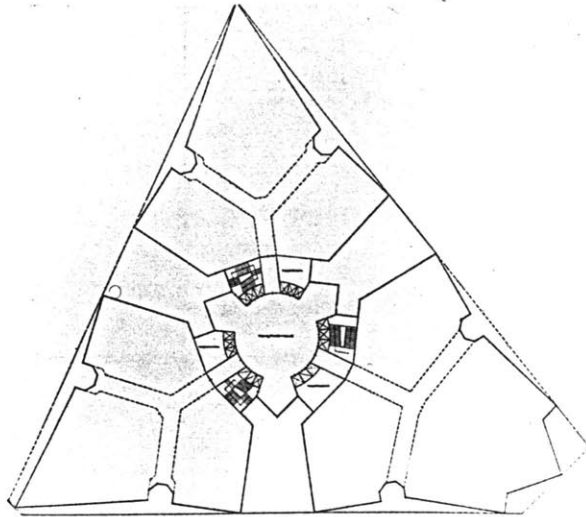
FIGURE 5—SKYSCRAPER OF IRON AND GLASS TO BE ERECTED IN BERLIN—GROUND PLAN
Architect, L. Mies van der Rohe, Berlin

elevators; it is rather the architectural composition of the   projecting outward from the center of the block per-
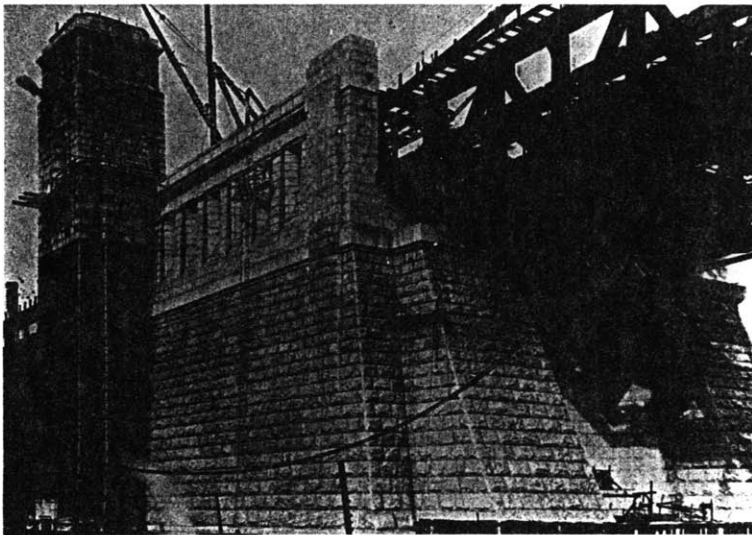
3.39
"Project for a skyscraper in iron and glass to be erected in Berlin," Mies van der Rohe, ca. 1923, plan illustrated in Walter Curt Behrendt, "Skyscrapers in Germany," AIAJ 11 (September 1923): pp. 365-70

3.40
Delaware River Bridge, Camden, NJ, Paul Cret with R. Modjeski, G.S.Webster and L.A.Ball, Engineers, 1922 (George Edgell, American Architecture of Today (New York, 1928)).

438
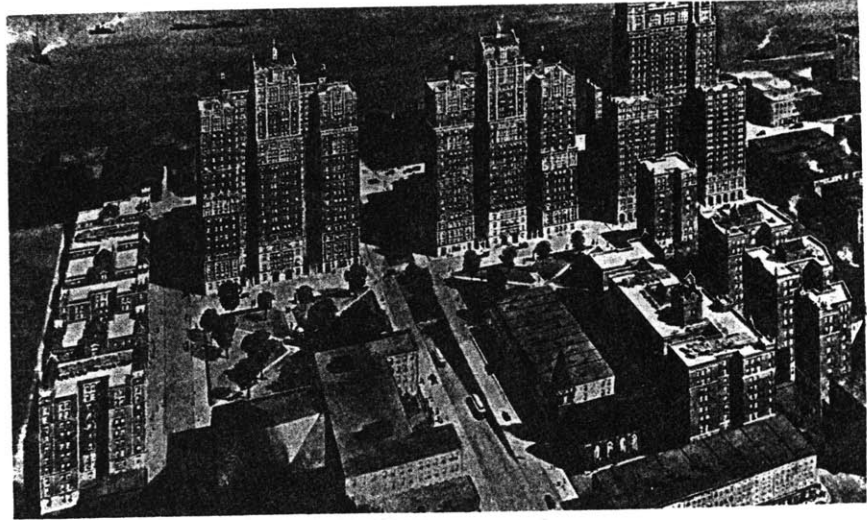
View of the Tudor City Group of the Fred F. French Company

3.41

Tudor City, New York, NY, Fred French Company, 1927-9 (AF 52 (1930)).

3.42

Ad for H.O.Stone & Co., Chicago, IL (CT, 16 May 1928).

439

3.43

Ad publicizing sale of bonds for the Herald Square Building, New York, NY, by G.L.Ohrstrom & Co. (CT, 16 May 1928).

3.44

Ad for S.W. Straus & Co., New York, NY. (NYT, 25 October 1927, p. 4).

3.45
Ad for Harmon National Realty
Trust (CT, 22 May 1928, p. 9).

3.46
Proposal for Apartment complex
between 23rd & 24th St., New York,
NY, Henry Mandel, Architects, ca.
1930 (AF 52 (1930)).
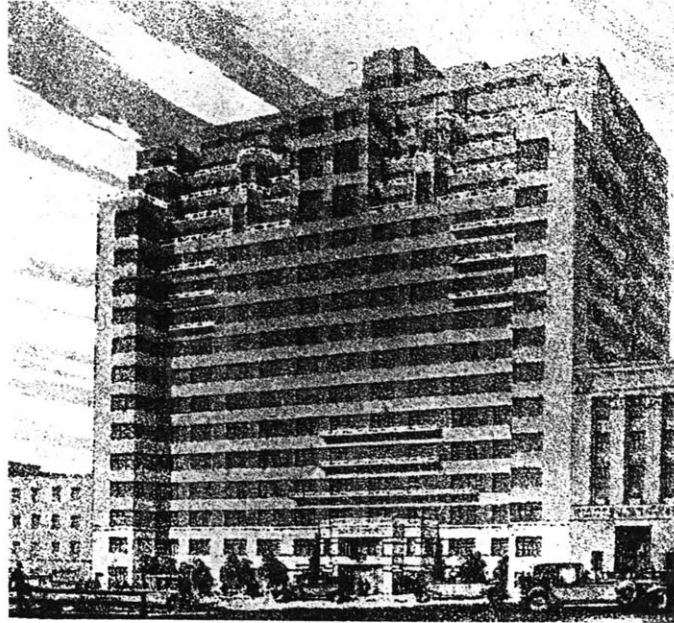
Beaux-Arts Apartments, New York
Firm of Kenneth M. Murchison, and Raymond Hood, Godley & Fouilhoux, Architects

3.47
Rendering of Beaux-Arts
Apartments, New York, NY,
Kenneth Murchison with Hood,
Godley & Fouilhoux,
1929.(J.T.Boyd, "Wall Street Enters
the Building Field," _AF_ 51 (July
1929): p. 123).

3.48
Prospectus for Beaux-Arts
Apartments, Inc., offered by the
National City Company offered in
1929 (_AF_ 59 (September 1933): pp.
244ff)
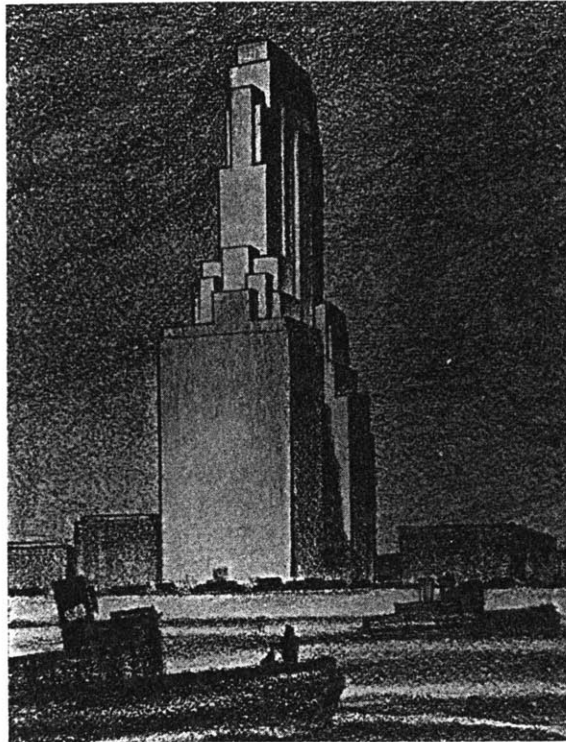
3.49
"A Real Estate Exchange Might Market the Securities for a Huge Combination Store, Office Building and Apartment House Such as this Proposed Battery Tower, New York." Thompson and Churchill, ca. 1929. (J.T.Boyd, "Wall Street Enters the Building Field," <u>AF</u> 51 (August 1929): p. 247).

3.50
Squibb Building, New York, NY, Buchman and Kahn, Architects, 1929 (James Neuman, "Factors in Office Building Planning," <u>AF</u> 52 (June 1930): pp. 881-90).

Figure 13

Figure 14

Figure 15

The Squibb Building, New York
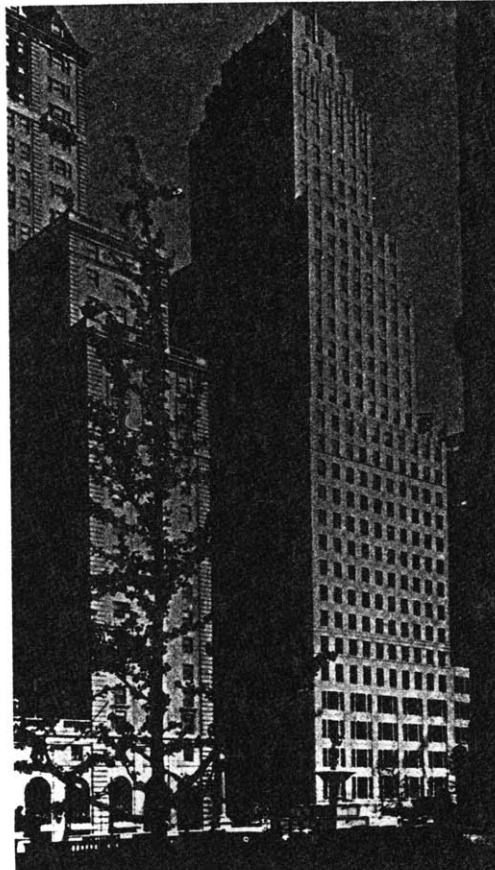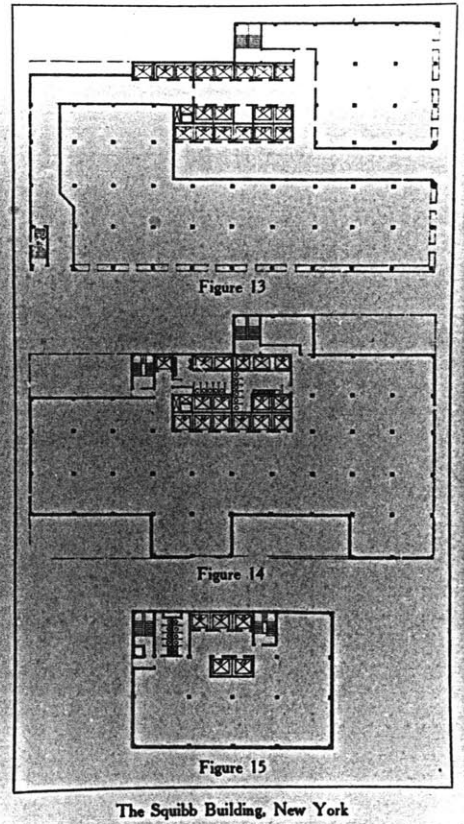
3.51

Squibb Building, plans (James
Neuman, "Factors in Office Building
Planning," AF 52 (June 1930): pp.
881-90).

3.52

Park Avenue Building, New York,
NY, Buchman and Kahn, 1928-29
(E.J. Kahn, "Economics of the
Skyscraper," AR 63 (April 1928): pp.
298-301).
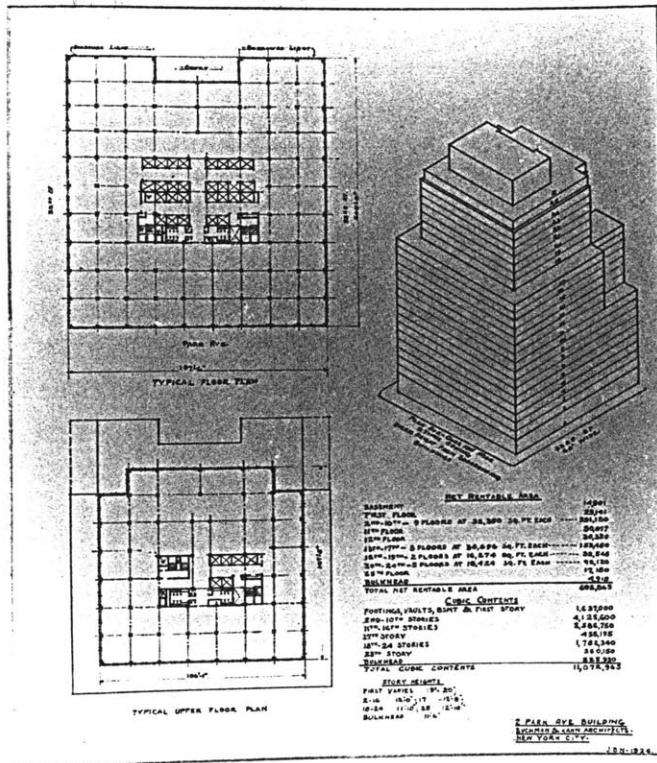
3.53
Park Avenue Building, analytical
drawings prepared by James
Neuman for Buchman and Kahn,
Architects (E.J. Kahn, "Economics of
the Skyscraper," AR 63 (April 1928):
pp. 298-301).

3.54
Ad for Hauserman Movable
Partitions (NYT, 25 October 1927)
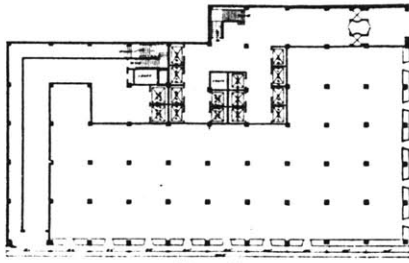
Figure 10

Figure 11

Figure 12

The Squibb Building, New York
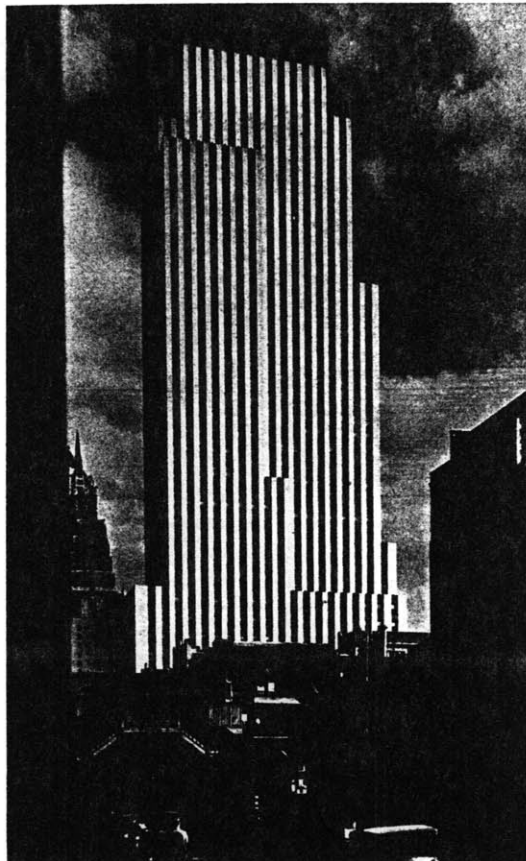
3.55
Alternate plans for the Squibb
Building (James Neuman, "Factors
in Office Building Planning," AF 52
(June 1930): pp. 881-90).

3.56
Daily News Building, New York,
NY, Raymond Hood, 1930 ("The
News Building," AF 53 (November
1930): pp. 539-61).
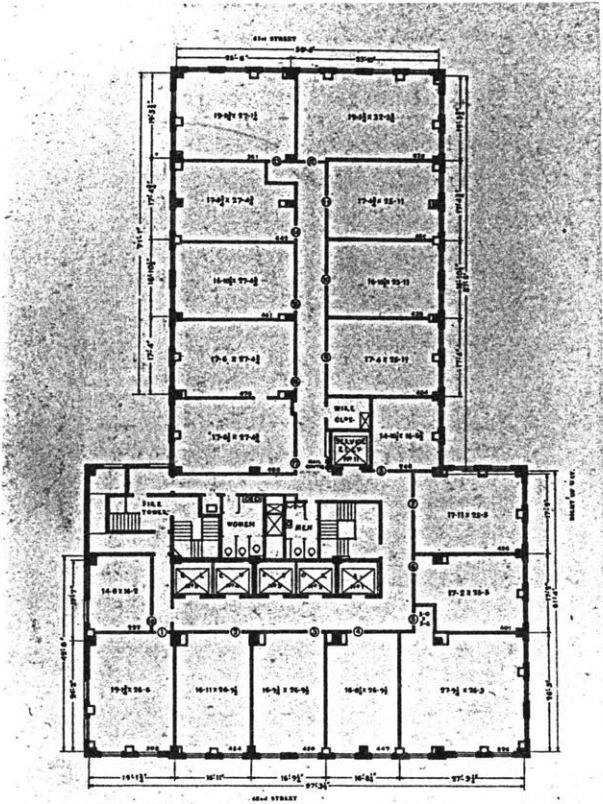
PLAN OF 27TH FLOOR, DIVIDED

3.57
Daily News Building, plan at upper
office floor ("The News Building,"
AF 53 (November 1930): pp. 539-61).

3.58
Beaux-Arts Apartments, New York,
NY, Kenneth Murchison with Hood,
Godley & Fouilhoux, 1930-31.(AF 53
(September 1930): pp. 305-6).
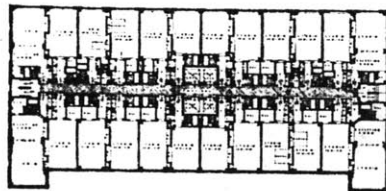
2ND TO 12TH FLOORS
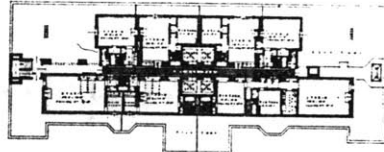
PENT HOUSE FLOOR

GROUND FLOOR
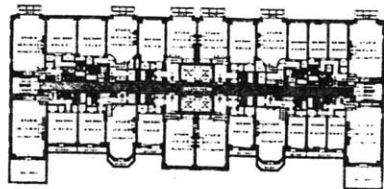
16TH FLOOR

3.59
Beaux-Arts Apartments, plans. (AF 53 (September 1930): pp. 305-6).

3.60
View of shuttle bus at Beaux-Arts Apartments. (AF 59 (September 1933): pp. 244ff)

448

3.61
View of doorman at Beaux-Arts
Apartments. (AF 59 (September
1933): pp. 244ff).

3.62
J.E. Boyd during Beaux-Arts
Apartment sponsored flight (AF 59
(September 1933): pp. 244ff).

FREE TRIPS TO WEST INDIES

MUSIC FOR SUMMER GARDEN

BEAUX-ARTS JOURNAL

HOME EDITION

COMBINED WITH
BEAUX-ARTS
HERALD · TRIBUNE

Vol 1, No 3   DEVOTED NOW AND THEN   · ROBERT PATTERSON · EDITOR   JULY, 1933

CAPTAIN BOYD RETURNS

Very Latest News

Postmaster Cancels Stamp

WAR-TIME ACE AND OCEAN FLIER AT BEAUX-ARTS

EXTRA!

ORCHESTRA FOR SUMMER GARDEN

NEW YORK, July 17—Jerry Levinson, composer of Darkness on the Delta, and other song hits will bring his famous Parisian Orchestra to the Summer Garden of the Cafe Bonaparte it was announced today.

LATEST RACING RESULTS

AT SECOND AVENUE

PROMOTION OFFICE ACTIVE

COMPANY CELEBRATES 50,000th ICE CREAM SODA

Postmaster John F. Kiely of New York City is here shown with Captain Boyd and Robert Lyon, cancelling the commemorative Haitian airmail stamp on the letter to Mayor O'Brien from the Mayor of Port-au-Prince, Haiti.

CAPTAIN BOYD'S OWN STORY

SPECIAL TO BEAUX-ARTS JOURNAL

NEW YORK CITY

3.63

Beaux-Arts Journal with headline documenting Boyd's trip (AF 59 (September 1933): pp. 244ff).

3.64

Scene from "The Cabinet of Doctor Caligari" depicting "Distorted Perspective and Discord" from Ben Lubchez, "The Cabinet of Doctor Caligari,"

3.65
Scene depicting "Rapid Gradation
from White to Black Giving an
Illusion of Great Depth" from Ben
Lubchez, "The Cabinet of Doctor
Caligari," <u>AIAJ</u> 9 (1921): pp. 213-15.

3.66
Scene depicting "Artificial Lines
used to Mislead the Eye" from Ben
Lubchez, "The Cabinet of Doctor
Caligari," <u>AIAJ</u> 9 (1921): pp. 213-15.
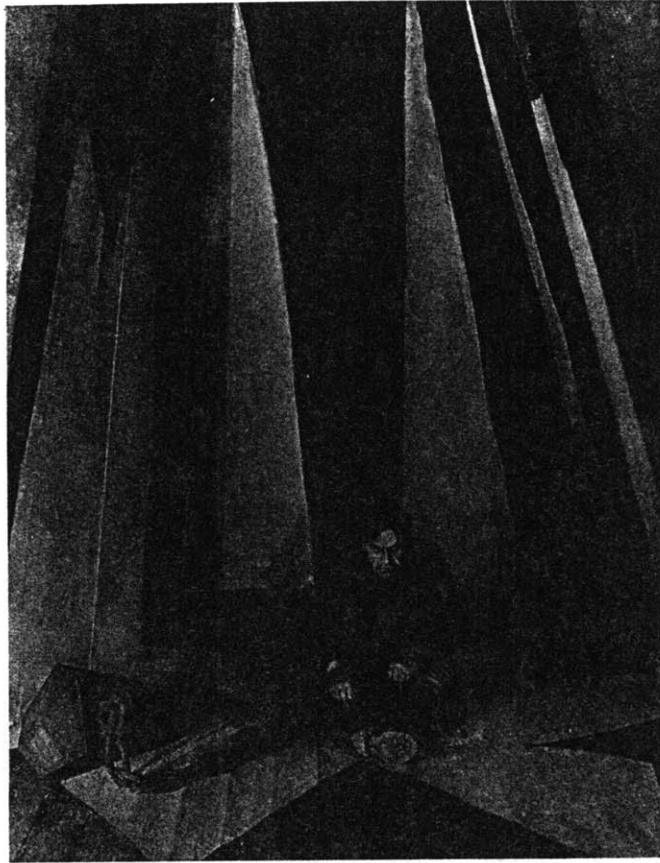
3.67
Scene depicting "Exaggerated and
Distorted Perspective - Discordant
Scales" from Ben Lubchez, "The
Cabinet of Doctor Caligari," AIAJ 9
(1921): pp. 213-15.

3.68
Roerich Museum and Masters
Apartment Building, New York, NY,
Corbett and Harrison, 1928-37
(Alfred Bossom, Building to the
Skies (New York, 1934)).
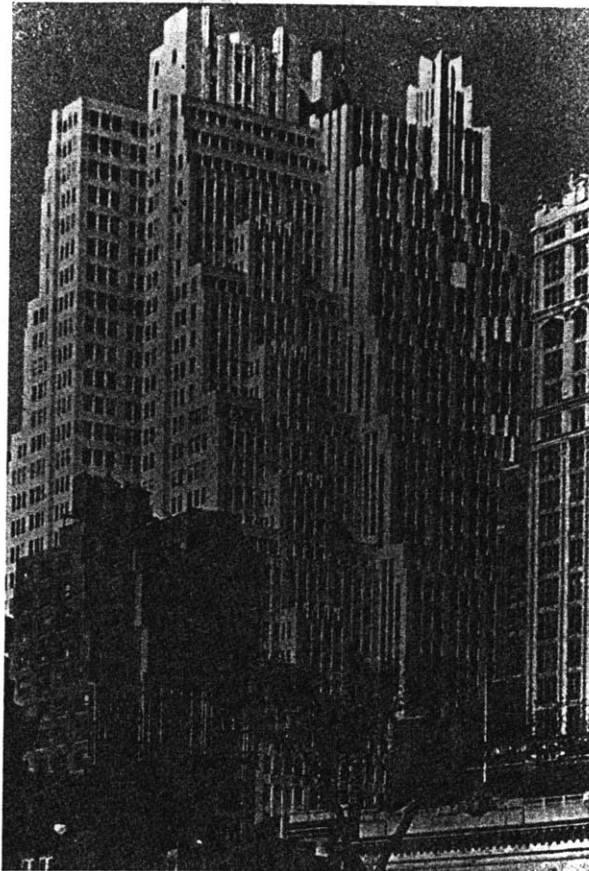
3.69
Bricken Casino Building, New York,
NY, Buchman and Kahn, Architects,
1930 (Alfred Bossom, Building to
the Skies (New York, 1934)).

3.70
Drawing for Bricken Casino
Building, Buchman and Kahn,
Architects (Sheldon Cheney, New
World Architecture (New York,
1930)).
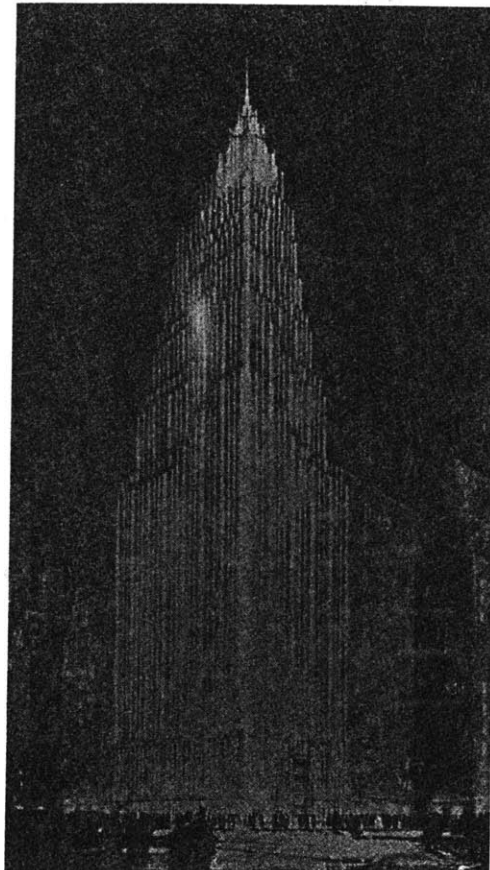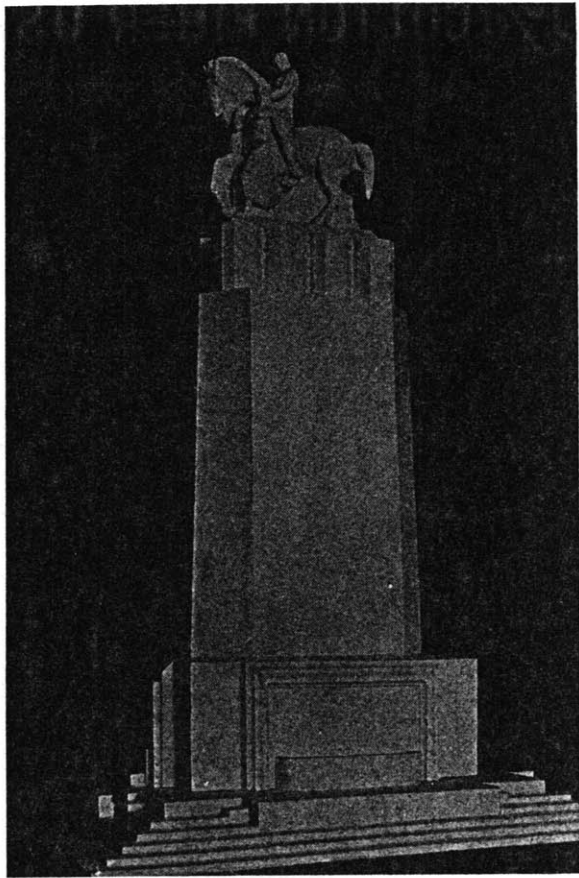
3.71
"Symbolic War Memorial," Leo
Friedlander, ca. 1927 (Leo
Friedlander, "The New Architecture
and the Master Sculptor," AF 46
(January 1927): pp. 1-8).
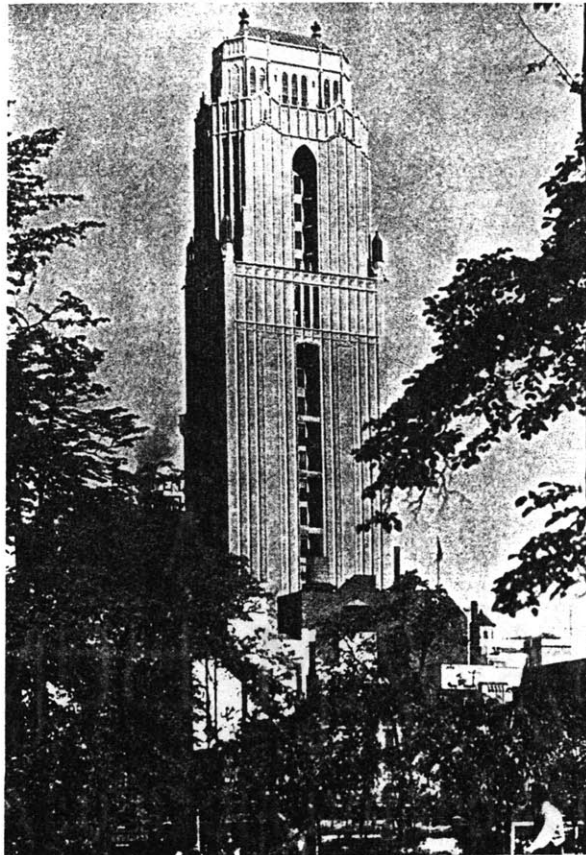
3.72
Bush Terminal Building, New York,
NY, Helmle and Corbett, 1916-17.
(from Leo Friedlander, "The New
Architect and the Master Sculptor,"
AF 46 (January 1927): pp. 1-8)
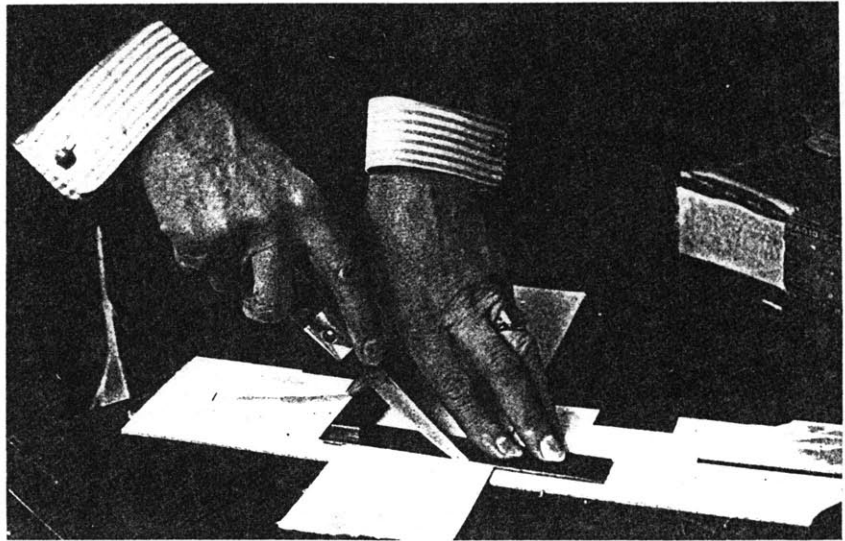
3.73
Method of using cardboard to form architectural models recommended by Harvey Wiley Corbett. (from Eugene Clute, <u>Drafting Room Practice</u> (New York, 1928).)

3.74
Photo of cardboard model of Bush Tower used in montage showing context (Eugene Clute, <u>Drafting Room Practice</u> (New York, 1928)).
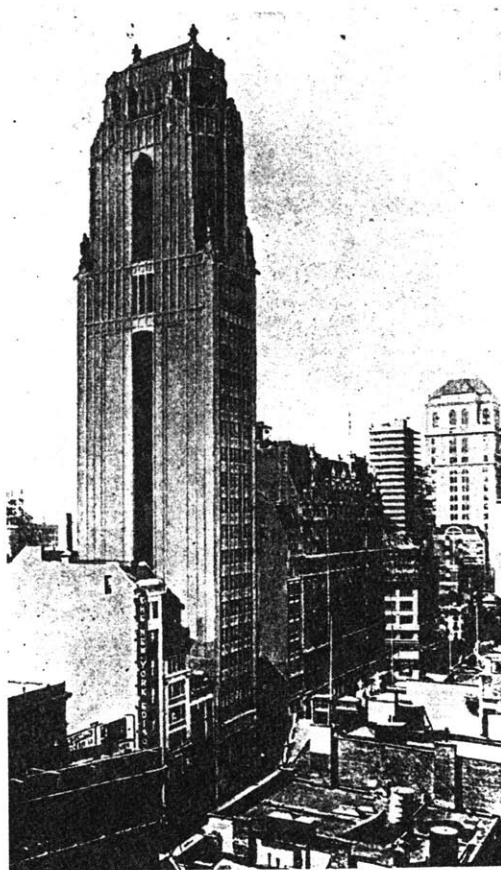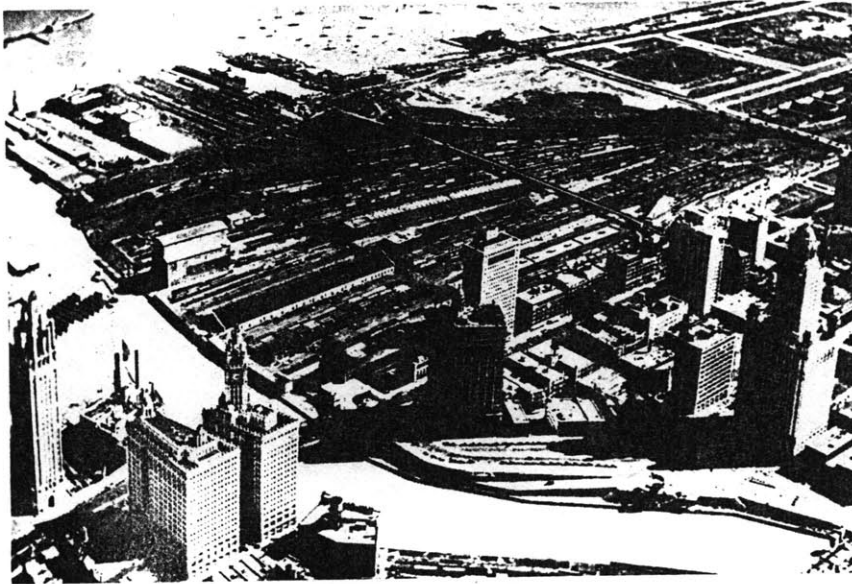
3.75
Photo of building site in Chicago, IL, prepared by Chicago Aerial Survey Company. (William Starrett, <u>Skyscrapers and the Men Who Build Them</u> (New York, 1928)).
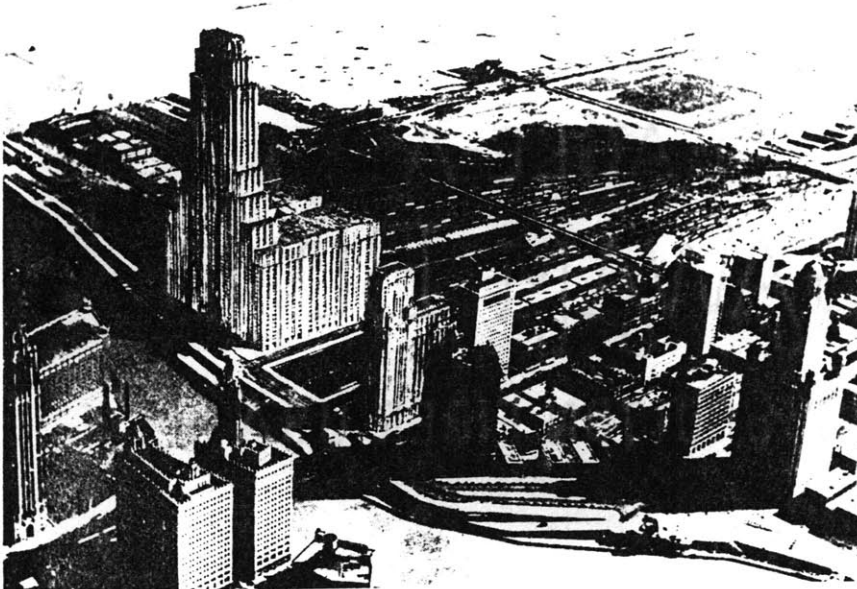
3.76
Aerial photo with superimposed image of new towers and urban open space (William Starrett, <u>Skyscrapers and the Men Who Build Them</u> (New York, 1928)).
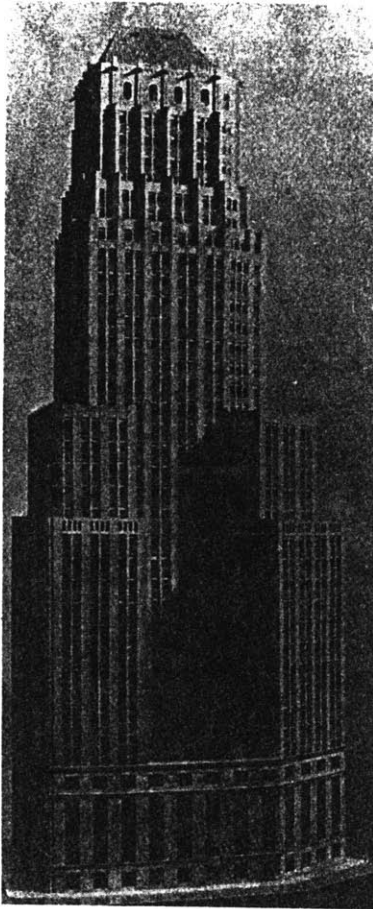
3.77
Model of the Wall and Hanover
Building, Delano and Aldrich
(William Starrett, Skyscrapers and
the Men Who Build Them (New
York, 1928)).

3.78
Interpretive drawing of Wall and
Hanover Street Building by Yasuo
Matsui (William Starrett,
Skyscrapers and the Men Who Build
Them (New York, 1928)).

Empire State 1931 | Eiffel Tower 1888 | Chrysler Building 1930 | Bank of Manhattan Trust Company 1930 | Woolworth Building 1912 | Lincoln Building 1930 | Metropolitan Tower 1908

Courtesy of Yasuo Matsui, Architect
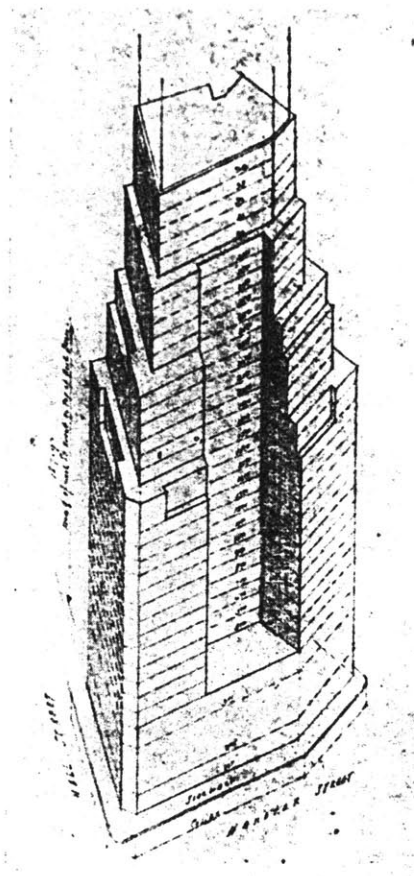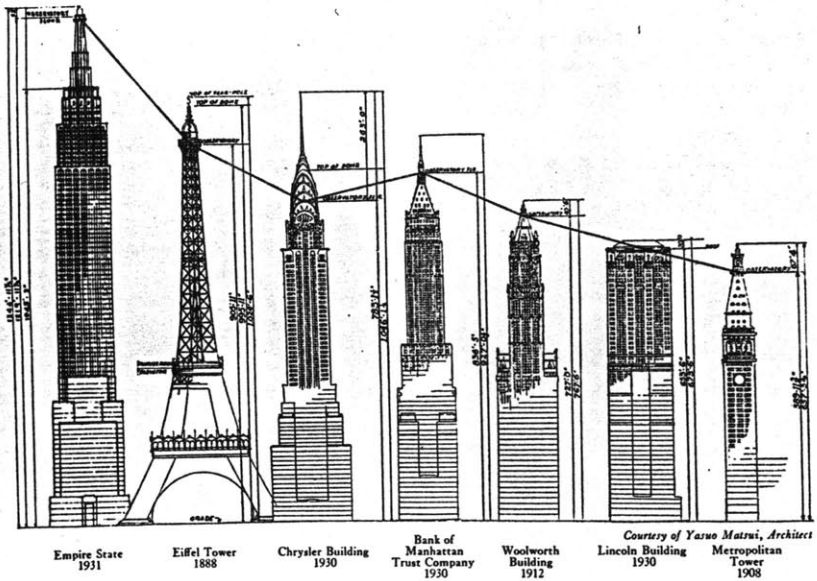
FIG. 22

3.79

Comparative drawing of the heights of the tallest structures in the world by Yasuo Matsui (Thomas Adams, The Building of the City (New York, 1931), p.182).

3.80

House designs offered by George Root (G. Root, "Can the Architect serve the Speculative Builder," AF 48 (January 1928): pp. 122-5).
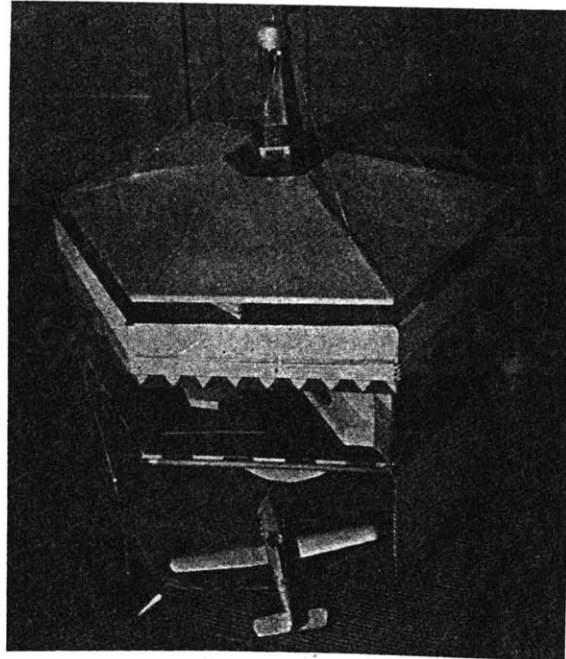
3.81

Proposal for a "Dymaxion House," Buckminster Fuller, ca. 1929 (R. Buckminster Fuller, "A House for Mass-Production," AF 51 (July 1929): pp. 103-4).

3.82

"Dymaxion House," plan (R. Buckminster Fuller, "A House for Mass-Production," AF 51 (July 1929): pp. 103-4).
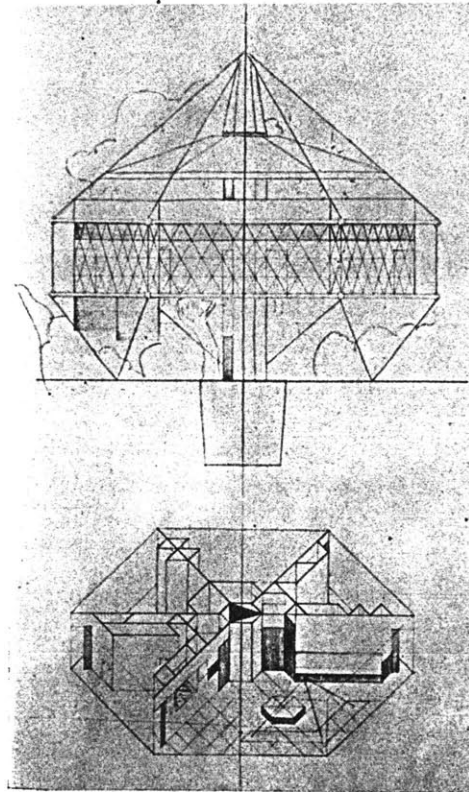
Elevation and Isometric Drawing of the Dymaxion House, Showing Stability of Construction Obtained by Triangulation of Steel in Tension
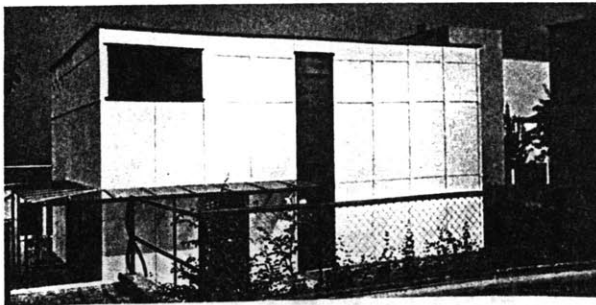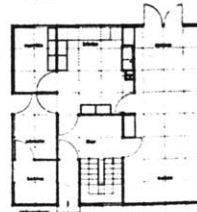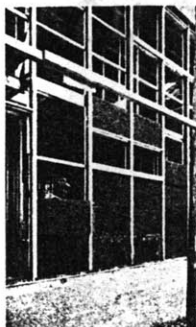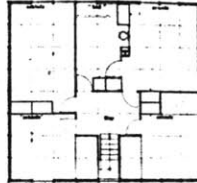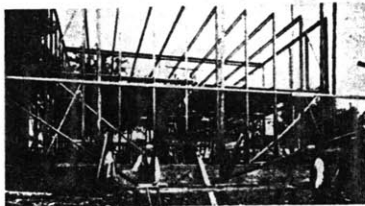
HOUSE AT STUTTGART, GERMANY
WALTER GROPIUS, ARCHITECT

The house was built entirely by the "dry mounting process," eliminating all building moisture. It is planned in reference to steel Z-bar skeleton on concrete foundations. The distance between supports—about 3' 6"—is used as a module. The walls are built of pressed cork sheets, about 3" thick and lined with sheets of asbestos board. Steel double windows are used

Above is a view of the finished building; the center shows the

HOUSE OF GEORGE MATTHEWS, JR.
CHAPPAQUA, N. Y.
MELVIN PRATT SPAULDING, ARCHITECT

EXTERIOR: Walls are combination of stucco, wood, stone and brick. Variegated cedar shingles for roof, stained dark to match door and wood casement and bay window trim.

INTERIOR: Walls are float finish plaster downstairs and in halls. Bedrooms are papered. Exposed hewn beams in dining room and living room. Trim stained dark. Zenitherm used for hall floors, all other stained pine.

CONSTRUCTION: Frame, costing $18,000 at 48 cents per cubic foot. Steam heat.
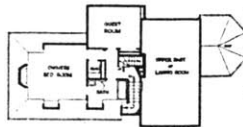
3.83
Single Family House at Stuttgart, Germany, Walter Gropius, 1927-8 illustrated in Walter Gropius, "The Small House Today," AF 54 (March 1931): pp.267-8).

3.84
"Single Family House" ("Sixteen Small Houses," AF v.54 (Mar. 1931): pp. 268ff).
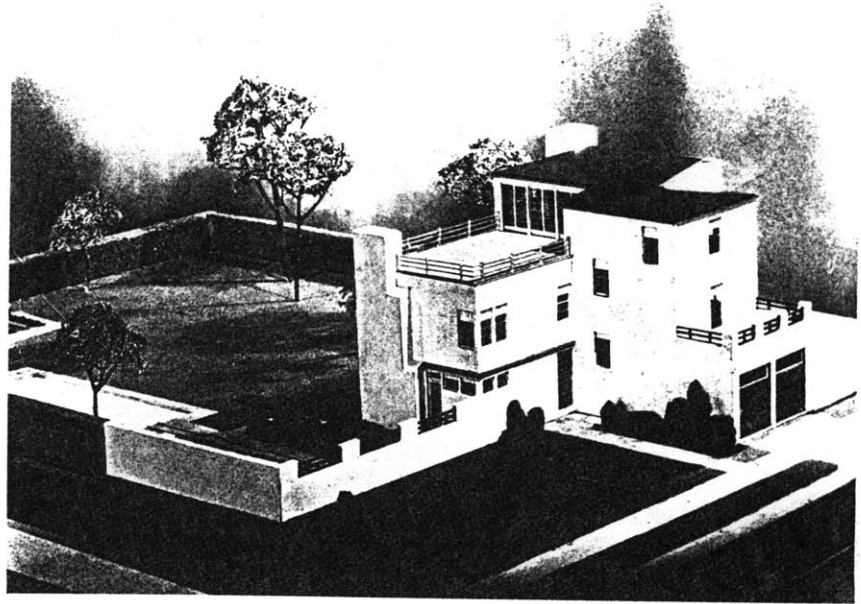
3.85
"Outdoor House," project for
"Forward House" sponsored by R.H.
Macy, Raymond Hood, 1933
("Forward House," <u>AF</u> 59 (October
1933): pp. 279ff).

3.86
"Outdoor House," plan ("Forward
House," <u>AF</u> 59 (October 1933): pp.
279ff).
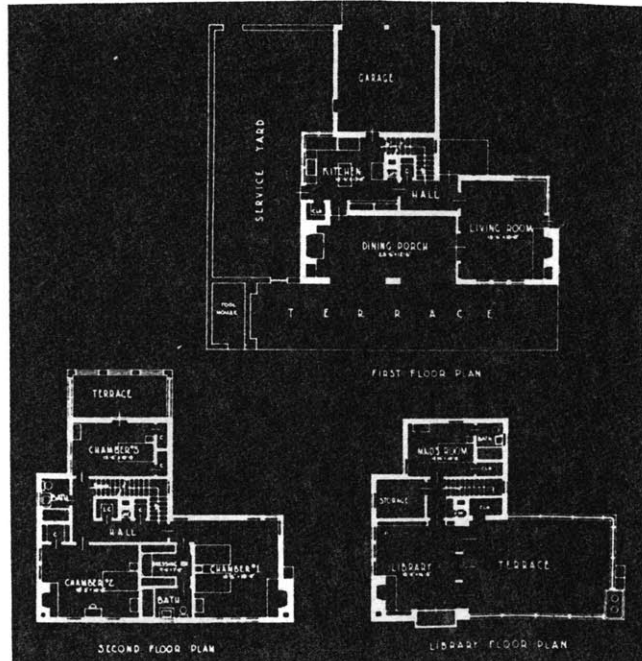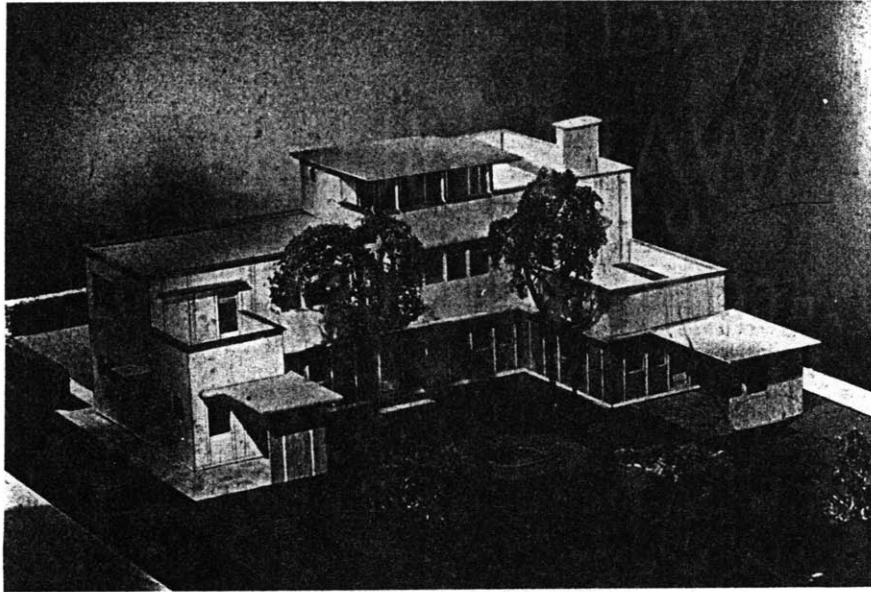
3.87
"Sun House," project for "Forward
House" sponsored by R.H. Macy,
Harvey Wiley Corbett, 1933
("Forward House," _AF_ 59 (October
1933): pp. 279ff).
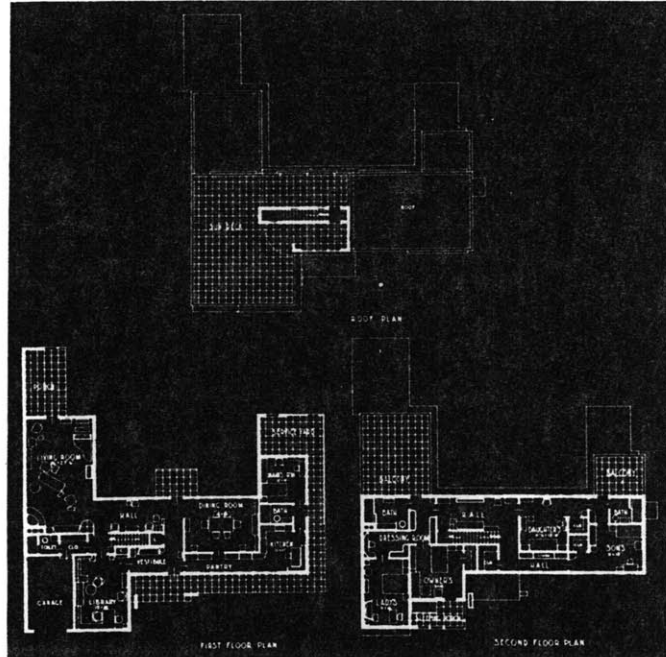
3.88
"Sun House," plan ("Forward
House," _AF_ 59 (October 1933): pp.
279ff).
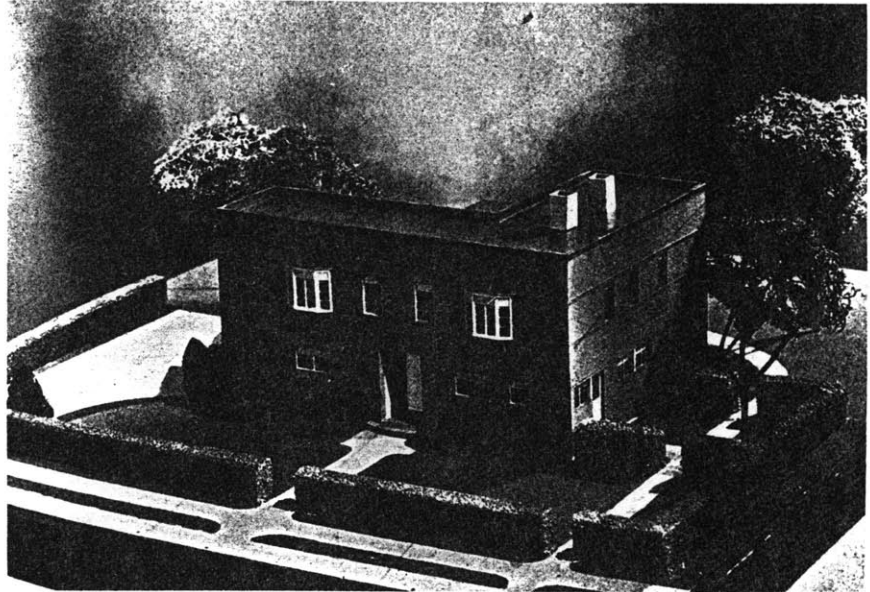
3.89
"Common Sense House," project for "Forward House" sponsored by R.H. Macy, Ely Jacques Kahn, 1933 ("Forward House," *AF* 59 (October 1933): pp. 279ff).

3.90
"Common Sense House," plan ("Forward House," *AF* 59 (October 1933): pp. 279ff).

A PRACTICAL SOLUTION OF THE SKYSCRAPER PROBLEM
FRANK LLOYD WRIGHT, ARCHITECT
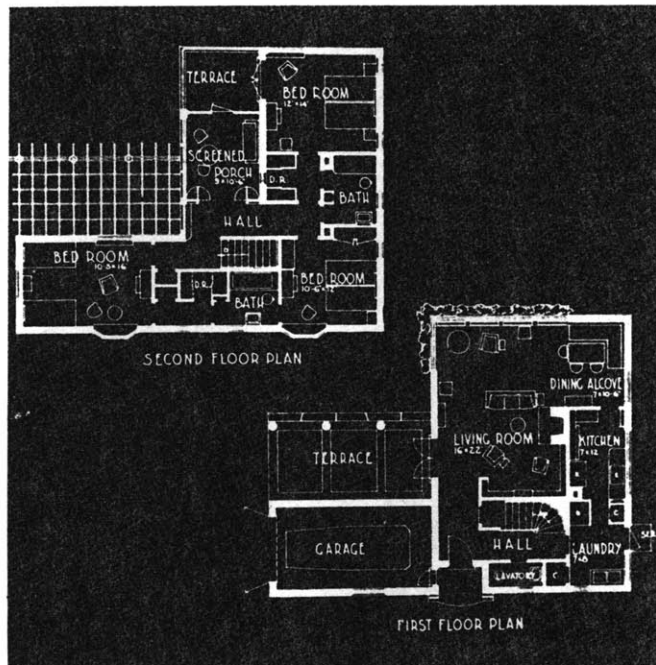
3.91
Winter construction view of New Jersey Telephone Building, Newark, NJ, Voorhees, Gmelin and Walker, before 1927 (William Starrett, <u>Skyscrapers and the Men Who Build Them</u> (New York 1928)).
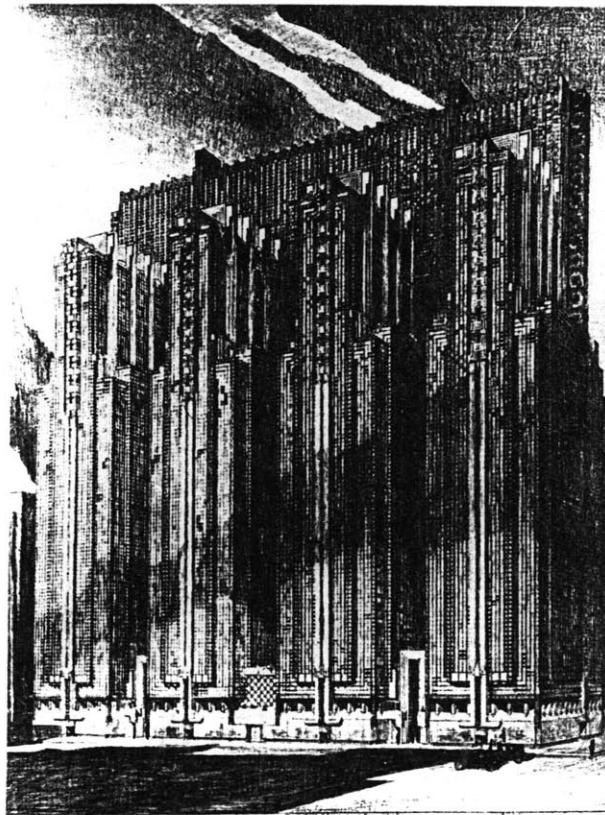
3.92
Project for a "Commercial Building in Concrete, Copper and Glass" (National Life Insurance Building), Frank Lloyd Wright, 1923, perspective (F.L. Wright, "In the Cause of Architecture, VII: Sheet Metal and a Modern Instance," <u>AR</u> 64 (October 1928): pp. 334-42).

3.93
"Commercial Building in Concrete, Copper and Glass," plan at ground floor and second-third-fourth stories (F.L. Wright, "In the Cause of Architecture, VII: Sheet Metal and a Modern Instance." AR 64 (October 1928): pp. 334-42).

3.94
"Commercial Building in Concrete, Copper and Glass," plan below setback level and at setback level (F.L. Wright, "In the Cause of Architecture, VII: Sheet Metal and a Modern Instance." AR 64 (October 1928): pp. 334-42).

SECTION

CANTILEVER SLAB
PYLON WALL SCREEN
RADIATION

A STREET

CROSS SECTION
THRO ONE OF FOUR
MAIN TRANSVERSE UNITS
COMMERCIAL BUILDING
CONCRETE·COPPER·GLASS
FRANK LLOYD WRIGHT ARCHITECT
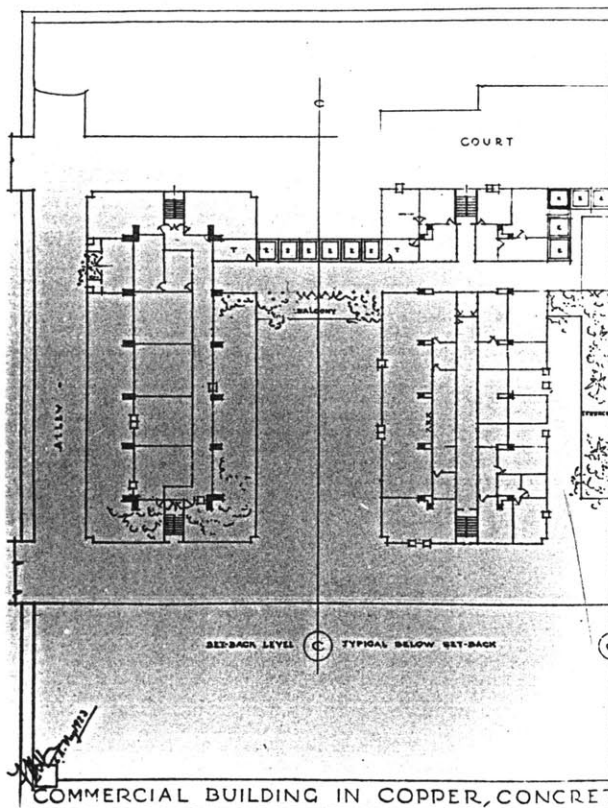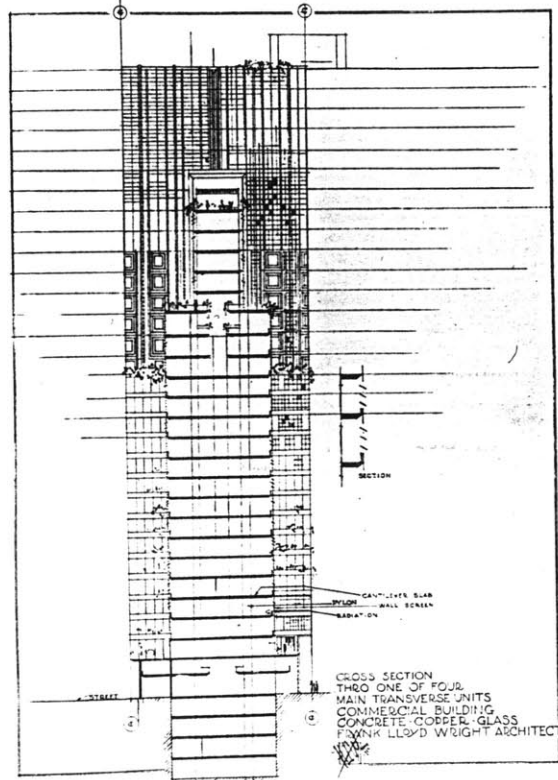
3.95
"Commercial Building in Concrete, Copper and Glass," section (F.L. Wright, "In the Cause of Architecture, VII: Sheet Metal and a Modern Instance," AR 64 (October 1928): pp. 334-42).

3.96
R.J. Reynolds Building, Winston-Salem, NC, Shreve and Lamb, Architects, 1929 (AF 52 (June 1930): pp. 837).
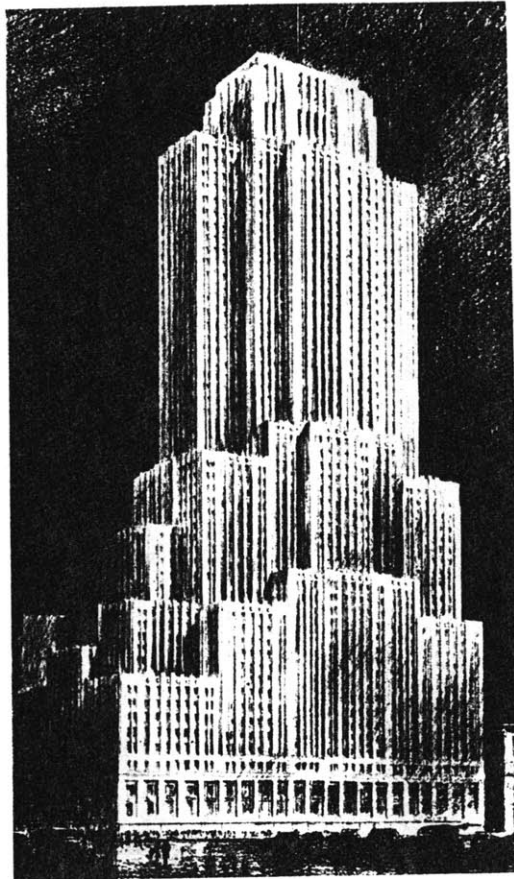
3.97
Scheme "J", early proposal for a building on the Empire State Building site, Shreve, Lamb and Harmon, ca. 1928 (William Lamb, "The Empire State Building, VII: The General Design," AF 54 (January 1931): pp. 2-7).

3.98
Scheme "J", early proposal for a building on the Empire State Building site, plans (William Lamb, "The Empire State Building, VII: The General Design," AF 54 (January 1931): pp. 2-7)
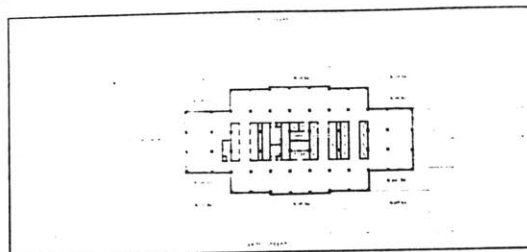
Plan, 31st to 45th Floor
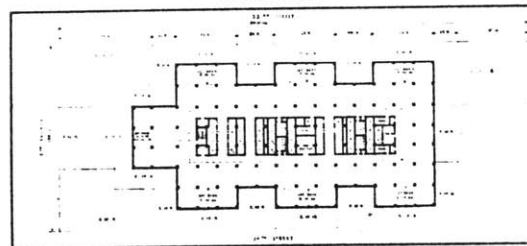
Plan, 19th to 30th Floor
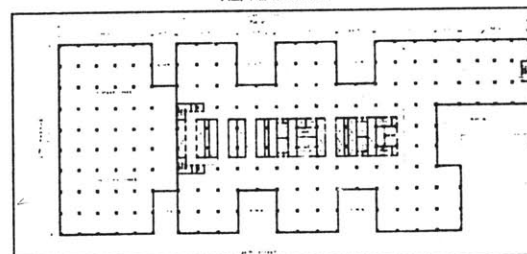
Plan, 6th to 11th Floor

Three Typical Floor Plans of Scheme "J" Which Were Developed From Previous Sketches Made For a Loft Type Building on the Same Site

Plan. 31st to 39th Floor

Plan. 22nd to 30th Floor

Plan. 6th to 21st Floor
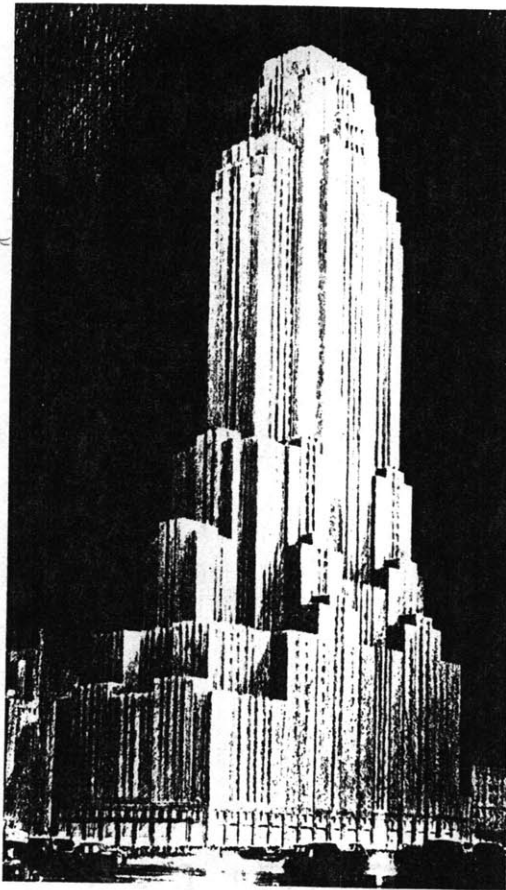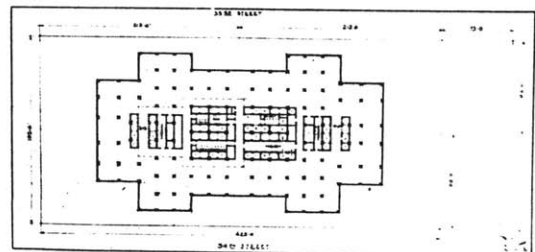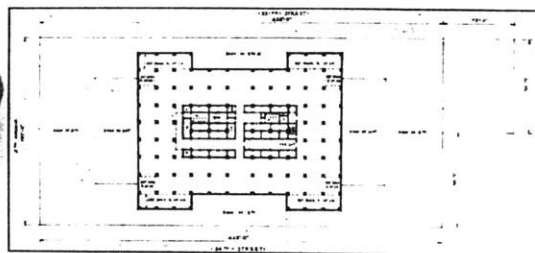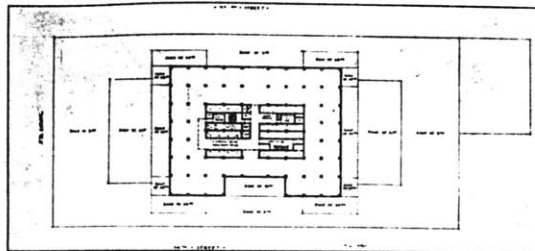
Three Corresponding Typical Plans of Scheme "K"
Which Were Made as a Result of the Preliminary

3.99

Scheme "K", early proposal for a building on the Empire State Building site (William Lamb, "The Empire State Building, VII: The General Design," AF 54 (January 1931): pp. 2-7).

3.100

Scheme "K", early proposal for a building on the Empire State Building site, plans (William Lamb, "The Empire State Building VII: The General Design," AF 54 (January 1931): pp. 2-7).

468

3.101
Empire State Building, final scheme
(William Lamb, "The Empire State
Building, VII: The General Design,"
AF 54 (January 1931): pp. 2-7).

3.102
Empire State Building, final scheme,
elevation (William Lamb, "The
Empire State Building VII: The
General Design," AF 54 (January
1931): pp. 2-7).

Plan, 33rd to 40th Floor

Plan, 24th Floor

Plan, 6th and 7th Floors

Three Corresponding Typical Floor Plans of the
Building as Finally Developed by the Detailed
Study Put Into the Actual Working Drawings
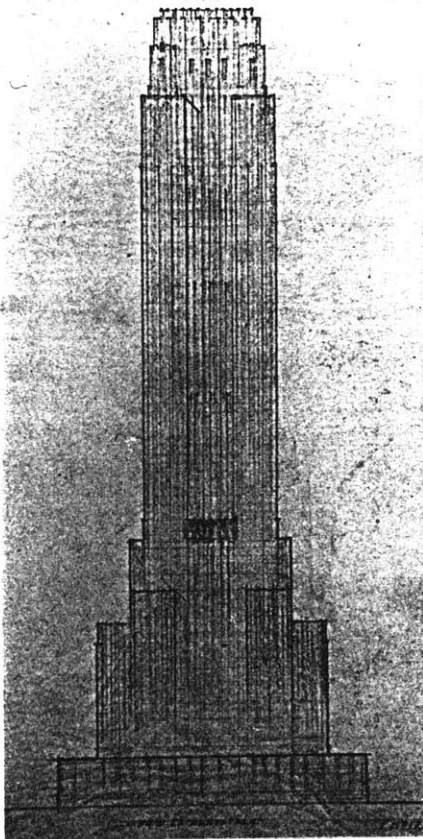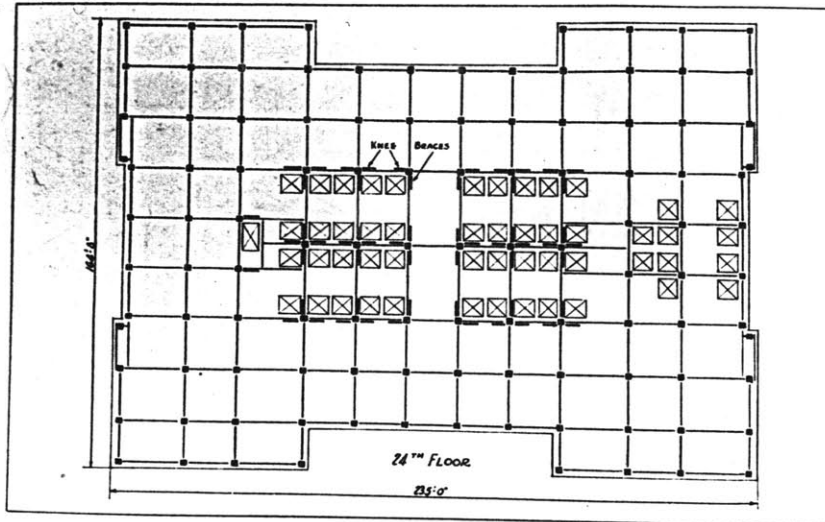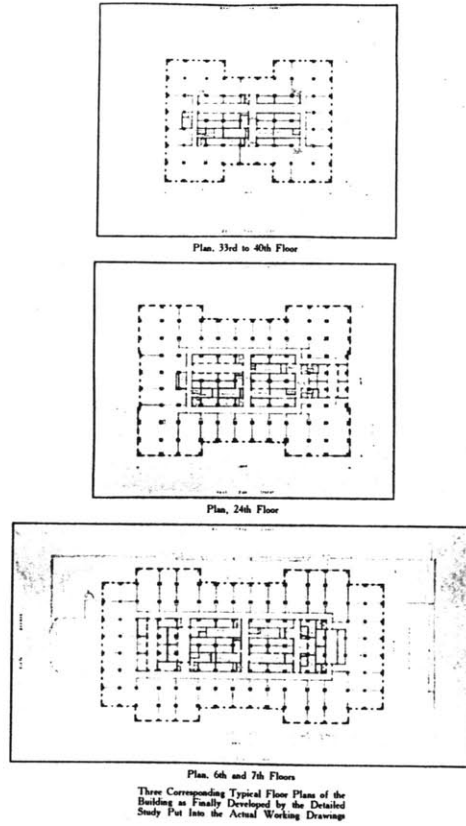
Figure 6. Plan Showing Location of Wind Bracing

3.103

Empire State Building, final scheme,
plans. (William Lamb, "The Empire
State Building VII: The General
Design," AF 54 (January 1931): pp.
2-7).

3.104

Empire State Building, column grid
(J.L. Edwards, "The Empire State
Building, III: The Structural Frame,"
AF 53 (August 1930): pp. 242-5).
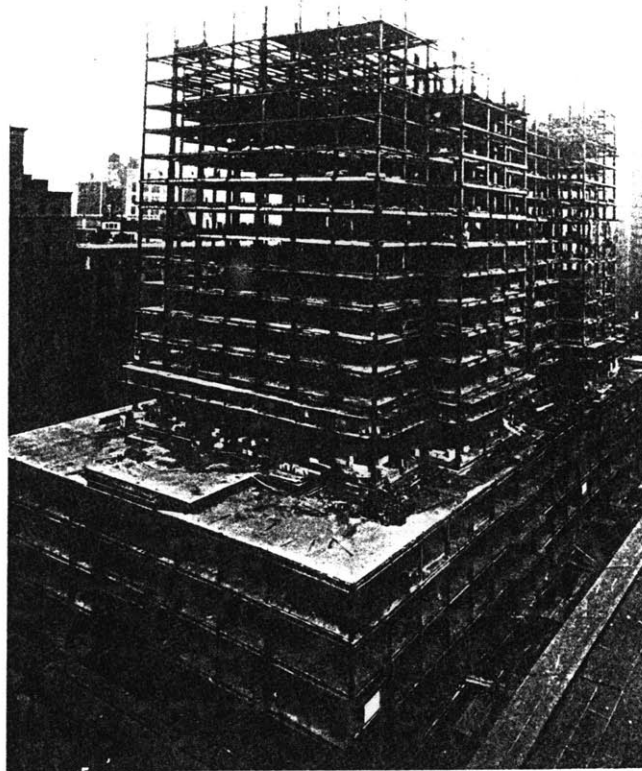
3.105

Empire State Building, view of steel
frame under construction (J.L.
Edwards, "The Empire State
Building, III: The Structural Frame,"
AF 53 (August 1930): pp. 242-5).

3.106

Empire State Building, section
through steel frame (J.L. Edwards,
"The Empire State Building, III: The
Structural Frame," AF 53 (August
1930): pp. 242-5).
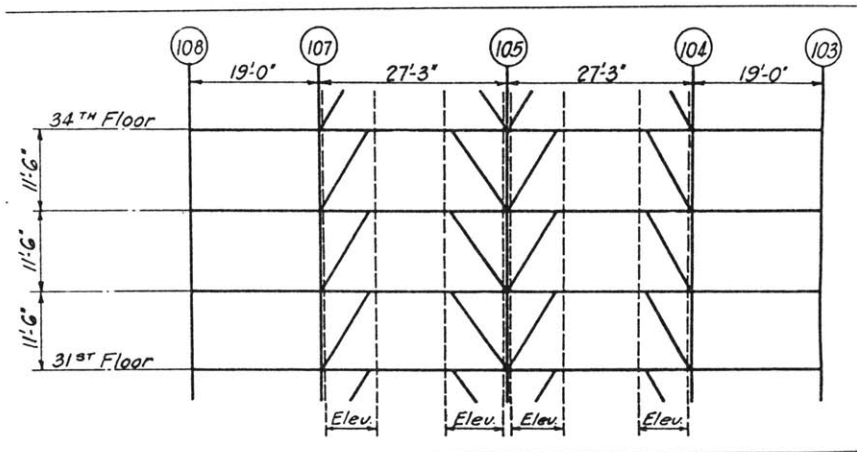
Figure 5. Typical Knee Bracing, Looking East

471

Type 1   Type 2   Type 3
Figure 3. Types of Built-up Column Sections

3.107

Empire State Building, schematic
drawing of column configurations
(J.L. Edwards, "The Empire State
Building, III: The Structural Frame,"
AF 53 (August 1930): pp. 242-5).

3.108

Empire State Building, axonometric
showing column/beam intersection
(J.L. Edwards, "The Empire State
Building, III: The Structural Frame,"
AF 53 (August 1930): pp. 242-5).

Figure 4. Typical Wind Bracing Connection

3.109

Empire State Building, structural steel key drawing (R.H. Shreve, "The Empire State Building Organization," AF 52 (June 1930): pp. 771-4).

3.110

Empire State Building, schedule showing critical relationships of work in time (R.H. Shreve, "The Empire State Building Organization," AF 52 (June 1930): pp. 771-4).
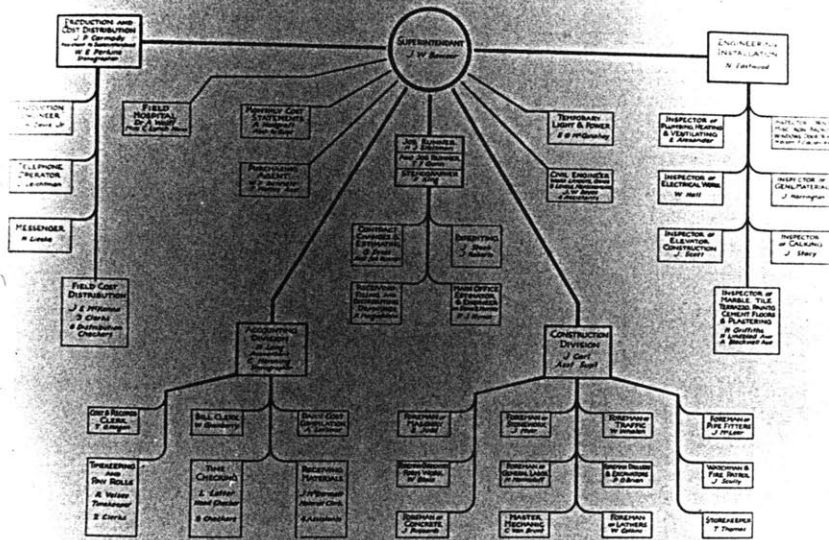
Chart showing the organization of the various departments of the contractor's force in the field

Typical Floor Equipment Layout
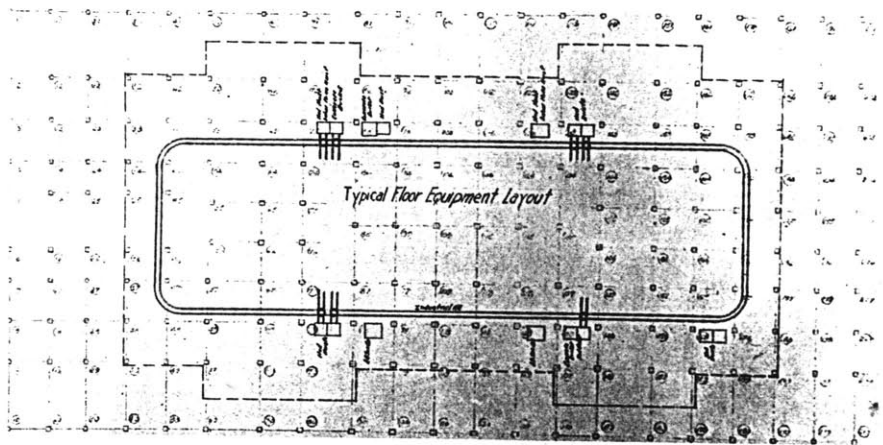
3.111

Empire State Building, diagram showing work relationships and lines of command (John Carmody, "The Empire State Building, X: Field Organization and Methods," AF 54 (April 1931): p.454).

3.112

Empire State Building, plan showing main supply cart rails (John Carmody, "The Empire State Building, X: Field Organization and Methods," AF 54 (April 1931): p. 454).

474
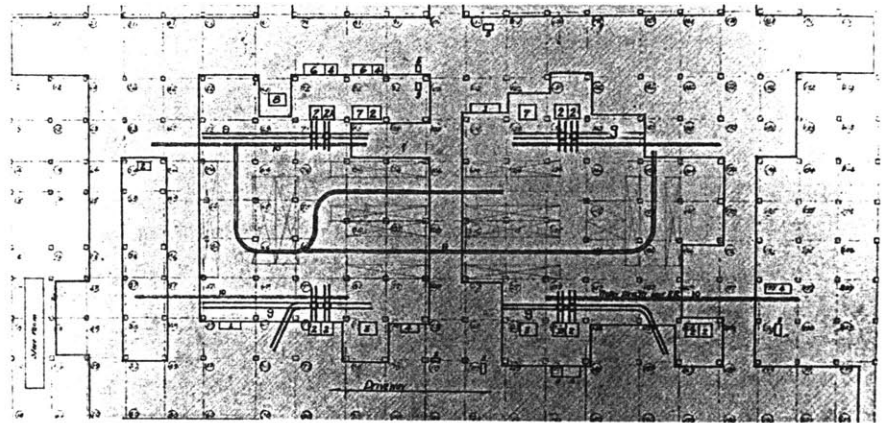
3.113
Empire State Building, plan showing
supply cart spur lines (John
Carmody, "The Empire State
Building, X: Field Organization and
Methods," AF 54 (April 1931): p.
454).

3.114
Empire State Building, supply cart at
brick hopper being filled (John
Carmody, "The Empire State
Building, X: Field Organization and
Methods," AF 54 (April 1931): p.
454).
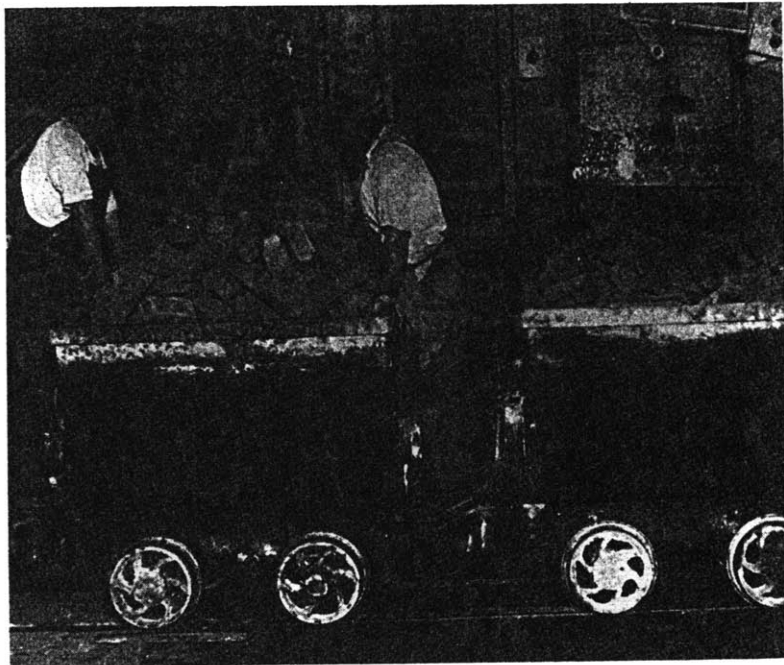
3.115
Empire State Building, supply cart at
elevator (John Carmody, "The
Empire State Building, X: Field
Organization and Methods," AF 54
(April 1931): p. 454).
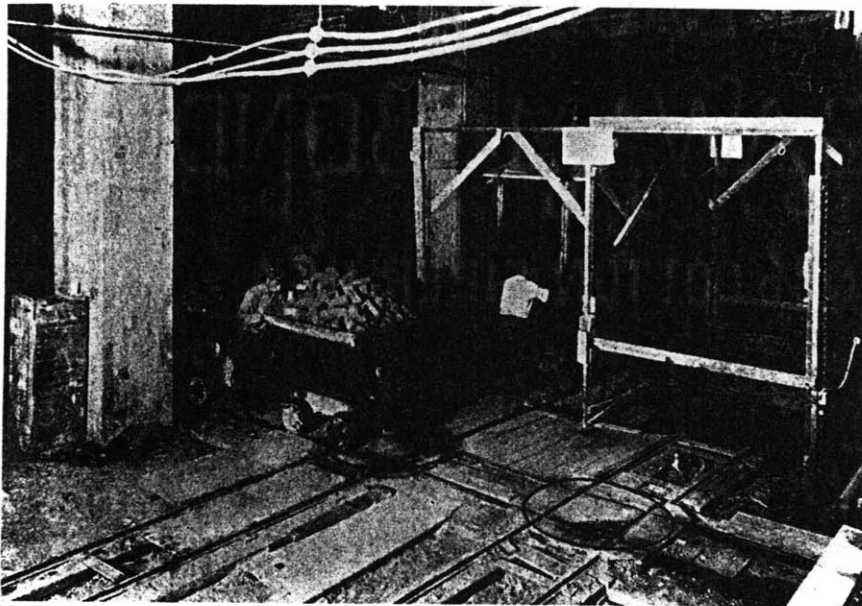
3.116
Empire State Building, rail system
on typical floor (John Carmody,
"The Empire State Building, X: Field
Organization and Methods," AF 54
(April 1931): p. 454).
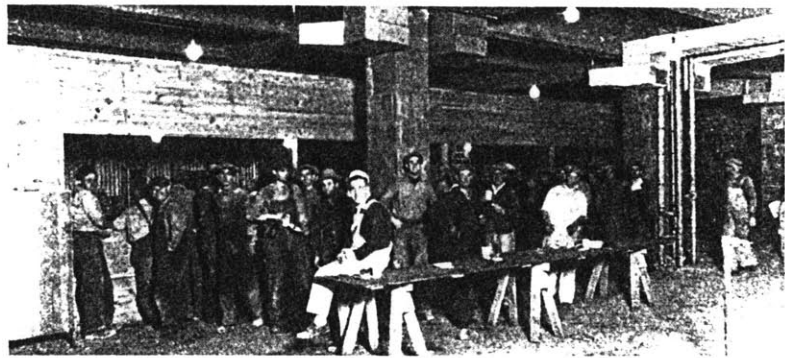
3.117
Empire State Building, workers at one of several construction site restaurants (John Carmody, "The Empire State Building, X: Field Organization and Methods," AF 54 (April 1931): p. 454).

3.118
Empire State Building, view of metal bay (H.R. Dowswell, "The Empire State Building, XI: Materials of Construction, AF 54 (March, 1937): p. 627).

SECTION 'B-B'   SECTION 'A-A'
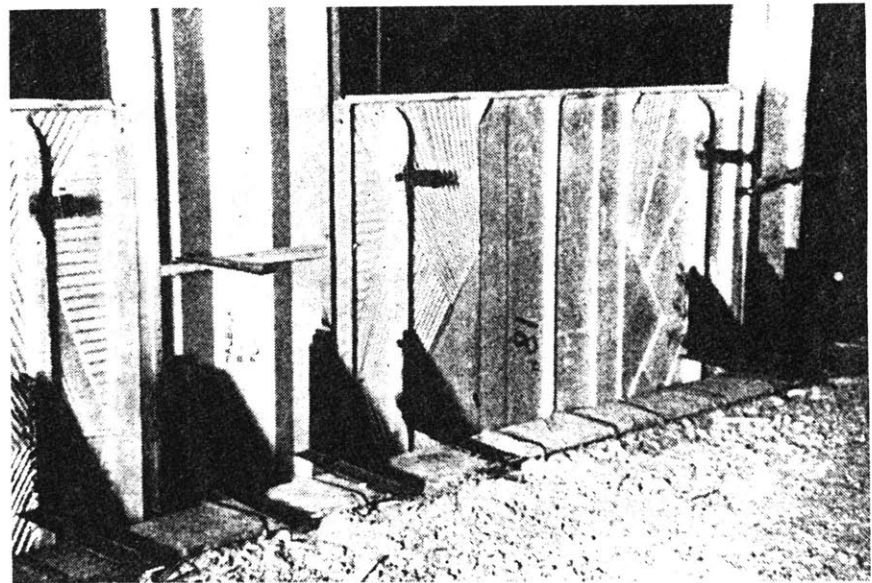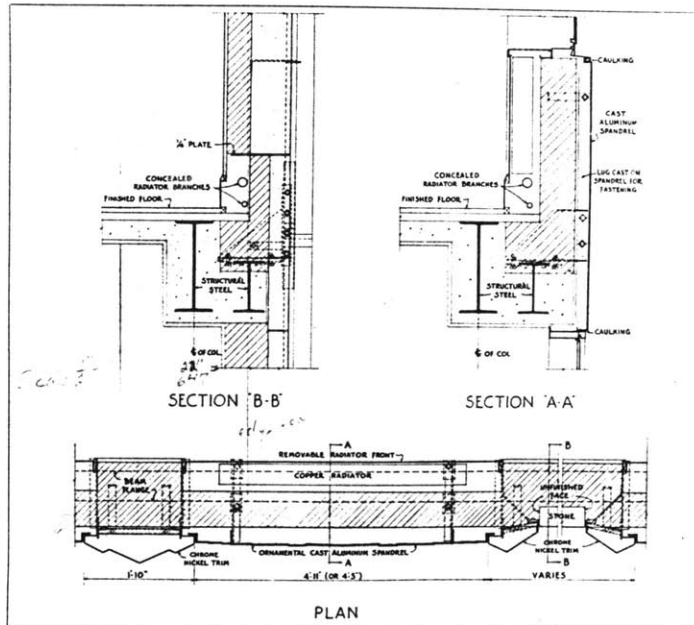
PLAN

then sawn to dimension for beds and joints and
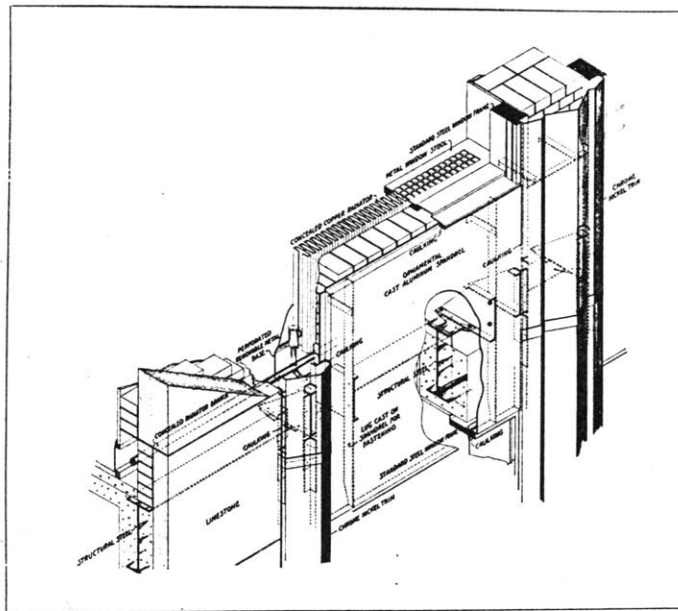
3.119

Empire State Building, plan and section at exterior wall. (from R.H. Shreve, "Empire State Building, II: The Window/Spandrel/Wall Detail and Its Relation to Building Progress," AF v. 53 (July 1930) pp.98-104).

3.120

Empire State Building, isometric of wall construction (R.H. Shreve, "Empire State Building, II: The Window/Spandrel/Wall Detail and Its Relation to Building Progress," AF 53 (July 1930): pp. 98-104).
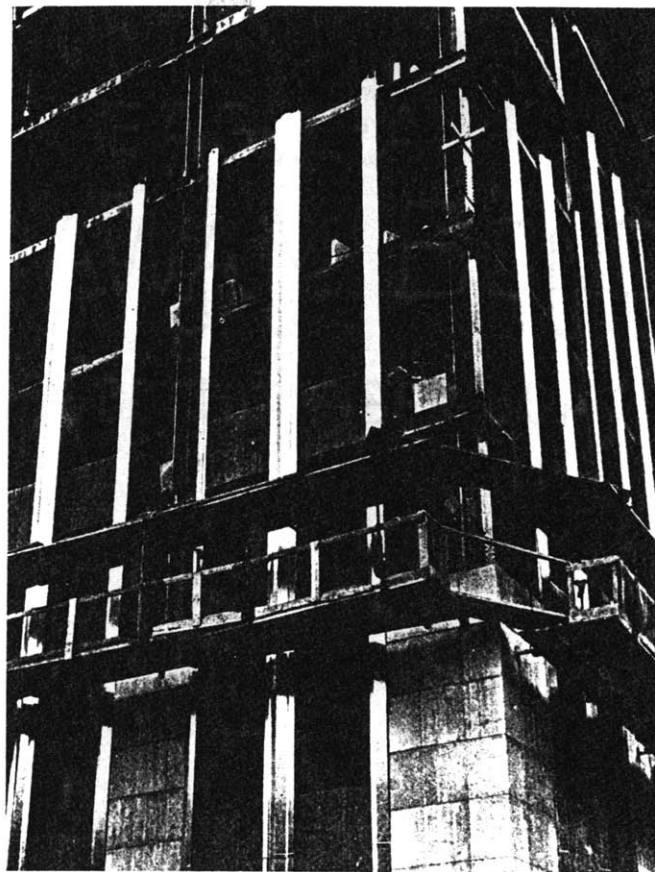
3.121
Empire State Building, view of
construction site (R.H.Shreve,
"Empire State Building, II: The
Window/Spandrel/Wall Detail and
Its Relation to Building Progress,"
AF 53 (July 1930): pp. 98-104).

3.122
Empire State Building, radiator
placement in perimeter walls (Henry
Meyer, The Empire State Building,
IV: Heating and Ventilating," AF 53
(October 1930): p.520).

JAMB SECTION
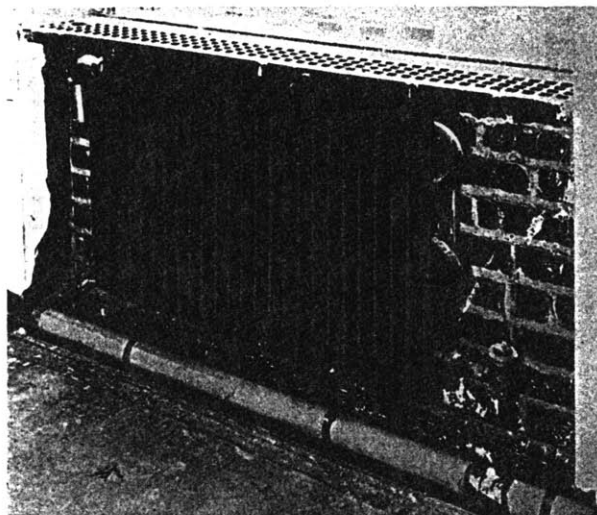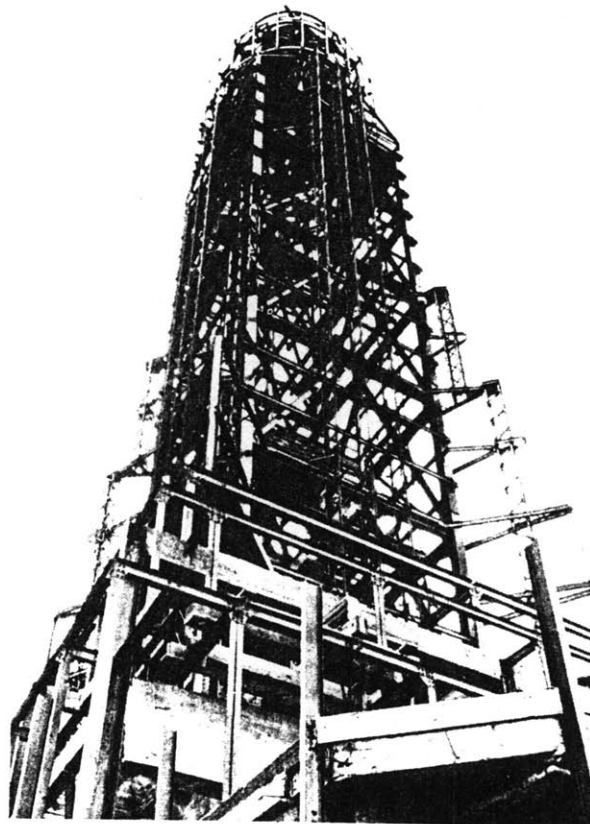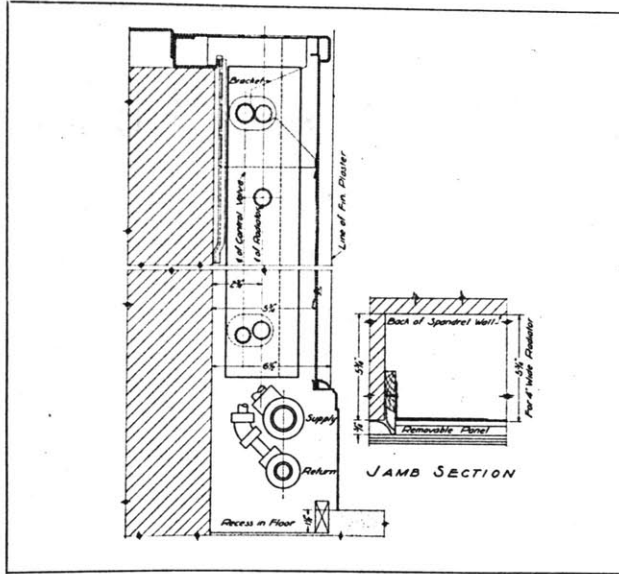
3.123
Empire State Building, radiator
placement in perimeter walls. section
(Henry Meyer, The Empire State
Building, IV: Heating and
Ventilating," AF 53 (October 1930):
p. 520).

3.124
Empire State Building, mooring
mast under construction (Irwin
Chanin, "Empire State Building IX:
The Mooring Mast," AF 54 (January
1931): p. 232).
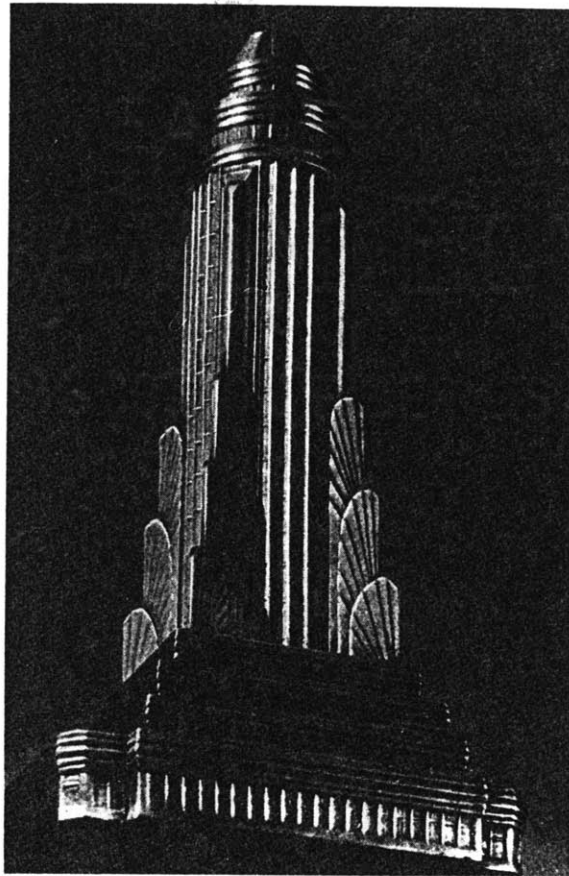
3.125
Empire State Building, mooring mast (Irwin Chanin, "Empire State Building IX: The Mooring Mast," AF 54 (January 1931): p.232).

3.126
Image of Empire State Building as model of "industrial design" in Sheldon and Martha Cheney, Art and the Machine (New York, 1936).

The Empire State Building, New York City, New York. The industrial-design approach clearly signalized, with machine-age idioms emphasized, but with little originality or formal-design expressiveness. Shreve, Lamb and Harmon, architects.

140

8. THE NEW ARCHITECTURE AS INDUSTRIAL DESIGN

THE Empire State Building, currently "the highest man-made structure," is somewhat less than perfectly expressive of the machine age; yet it could have been built in no other time than the machine age. Its uses do not include certain of those fondly hoped for by the architects and owners. Its pinnacle serves no Zeppelins as mooring mast. There are scores of unoccupied floors, evidence of miscalculation as to economic function. Nor is the building first-rate when considered objectively as Modern visual design. Nevertheless it serves admirably as a symbol.

To vantage points for miles around, it advertises that there is a new architecture. As one sees it beyond the Metropolitan Life tower (Venetian) or the New York Life tower (Gothic) or the Paramount Building (Hollywood Eclectic), it is like a standard raised to the sky asserting that between the time of erection of those other monuments, traditionally styled, and the building of the Empire State, something like a revolution had occurred. The squared forms, the naked unbroken lines, the preponderance of gleaming metal and glass, proclaim independence of traditional artistic influences, and reliance upon visual idioms of the mechanized era. Thus the world's highest building is something less than eminent as architecture, and yet holds up unmistakably the sign: "There is a new way of building."

The building advertises not only new methods and new materials, both born of the machine processes, but also, in its negative aspects—by those unoccupied acres and acres of offices—the necessity of a new approach to architecture: as a complex of social and economic problems, as itself a mechanism to be fitted functionally among other machines.

It is not by chance that the new architecture and the new industrial

141

481

CHICAGO WORLD'S FAIR

Architects, Holabird, Brown, Cret, Corbett, Walker, Bennett, Hood and Burnham
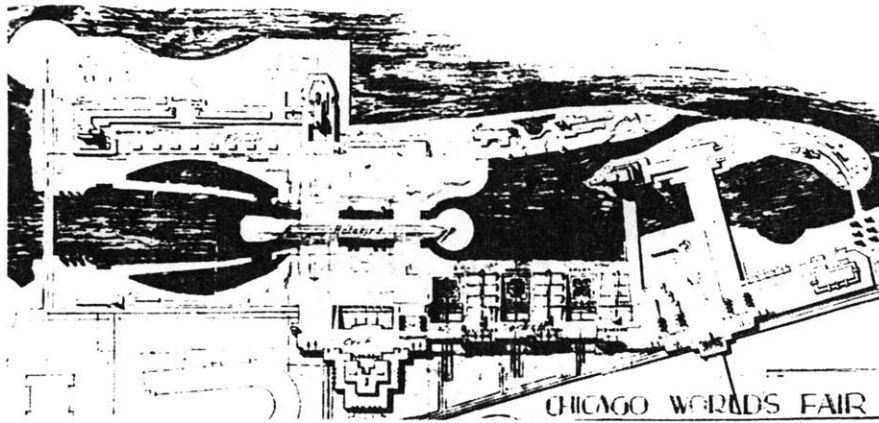
3.127
"Century of Progress Exposition," Chicago, IL, 1933, accepted site plan, ca. 1929 (AF 59 (July 1933)).

3.128
Group portrait of Architectural Commissioners (John Holabird, Arthur Brown, Paul Cret, Harvey Wiley Corbett, Ralph Walker, Edward Bennett, Raymond Hood, Hubert Burnham) (AF 59 (July 1933)).

3.129
"Century of Progress Exposition,"
site plan (AF 59 (July 1933): p. 1).

3.130
"Century of Progress Exposition,"
aerial view. (AF 59 (July 1933): p.2).

3.131

"Century of Progress Exposition," steel frame of Hall of Science, Paul Cret (from Nathaniel Owings, "New Materials and Building Methods for Chicago Exposition.," AR 71 (April 1932): pp. 279-89).
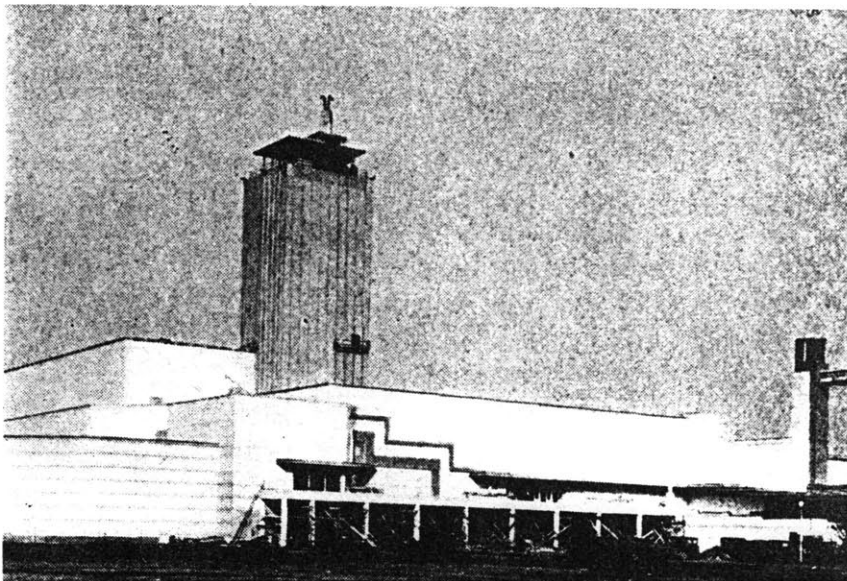
3.132

"Century of Progress Exposition," view of Hall of Science after cladding with sheet rock (Nathaniel Owings, "New Materials and Building Methods for Chicago Exposition," AR 71 (April 1932): pp. 279-89).
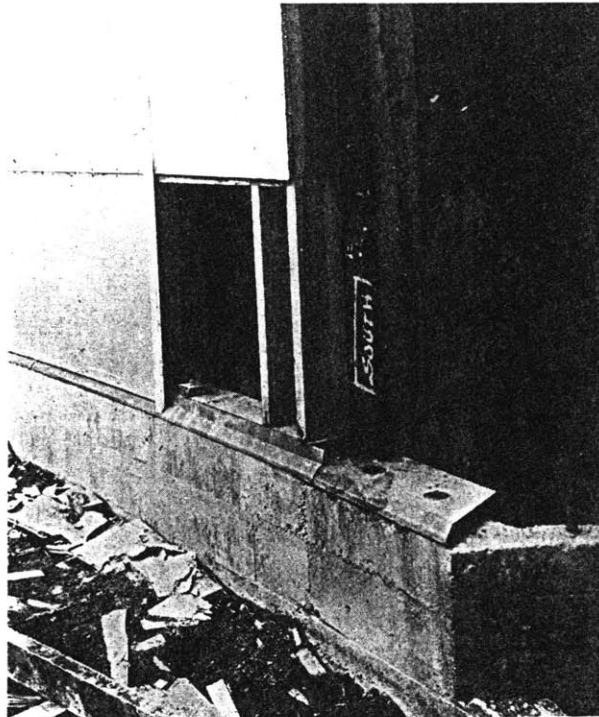
3.133
"Century of Progress Exposition,"
typical sheetrock exterior wall
covering (Nathaniel Owings, "New
Materials and Building Methods for
Chicago Exposition," AR 71 (April
1932): pp. 279-89)

3.134
"Century of Progress Exposition,"
section/detail through outer wall at
foundation and pile head (Nathaniel
Owings, "New Materials and
Building Methods for Chicago
Exposition," AR 71 (April 1932): pp.
279-89).

FIGURE 1
One-pile footing.

FIGURE 3
Two-pile footing.

WALL FACING
WOOD STUDS
FACIA BOARD
FLOOR LINE
GRADE
FLOOR ON FILL
WOOD BEAM
STEEL COLUMN
CONCRETE PILE CAP
WOOD PILE

FIGURE 2

485
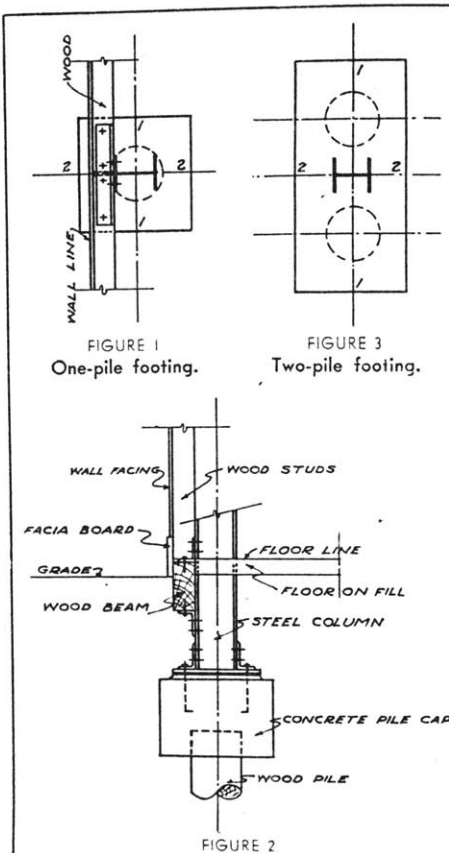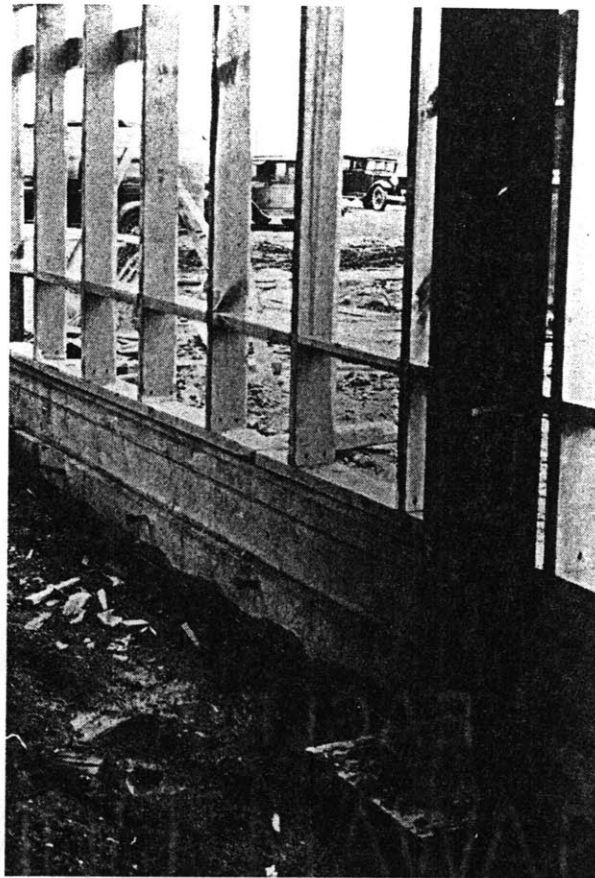
3.135
"Century of Progress Exposition," typical column base and concrete wall beam supporting wood stud wall framing (Nathaniel Owings, "New Materials and Building Methods for Chicago Exposition," AR 71 (April 1932): pp. 279-89).
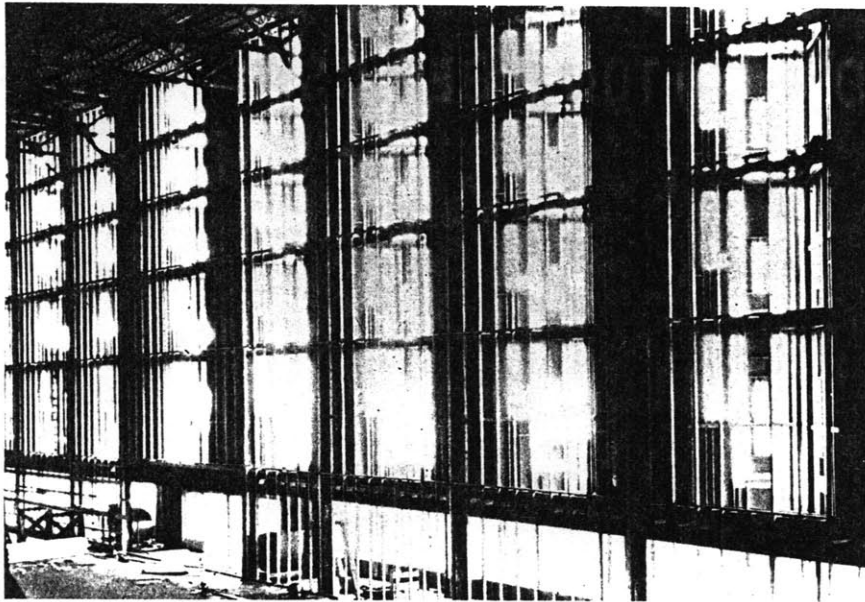
3.136
"Century of Progress Exposition," stud wall framing interior of Main Hall of Hall of Science (Nathaniel Owings, "New Materials and Building Methods for Chicago Exposition," AR 71 (April 1932): pp. 279-89).

THE OPEN ROTUNDA, HALL OF SCIENCE

FIRST FLOOR PLAN
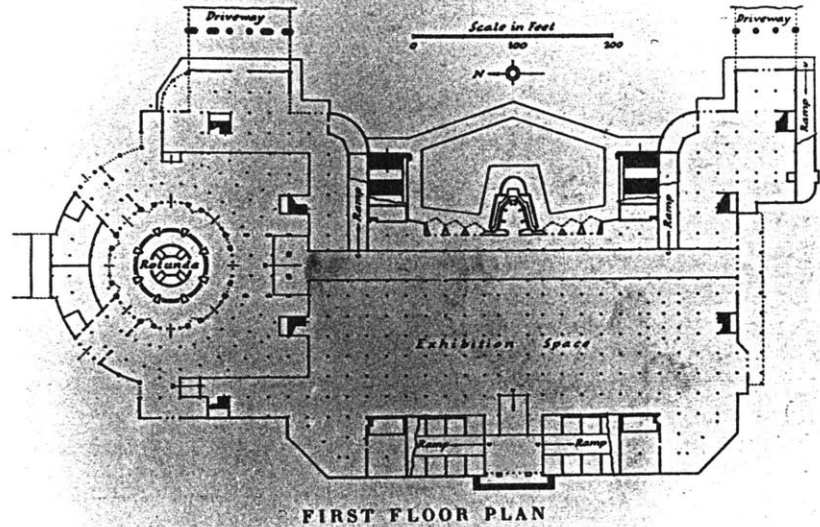
3.137

"Century of Progress Exposition,"
Hall of Science, Paul Cret, plan (AF
59 (July 1933): pp.9ff).

3.138

"Century of Progress Exposition,"
Hall of Science, interior of Main
Hall (AF 59 (July 1933): pp.9ff)
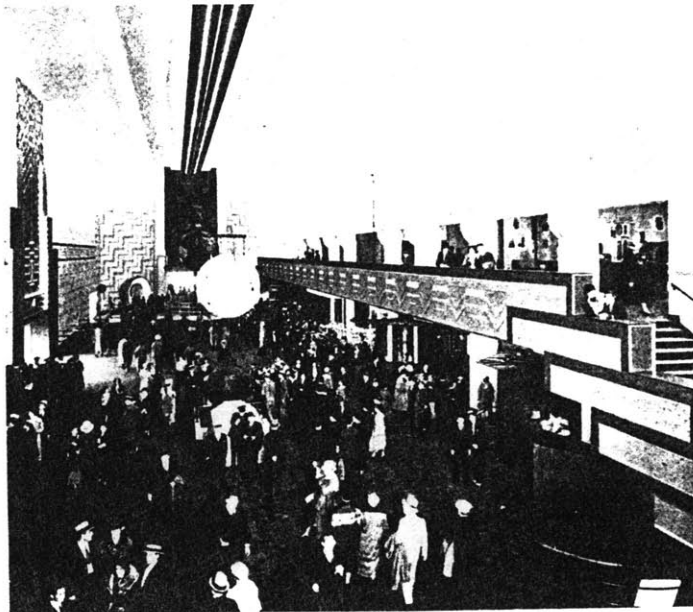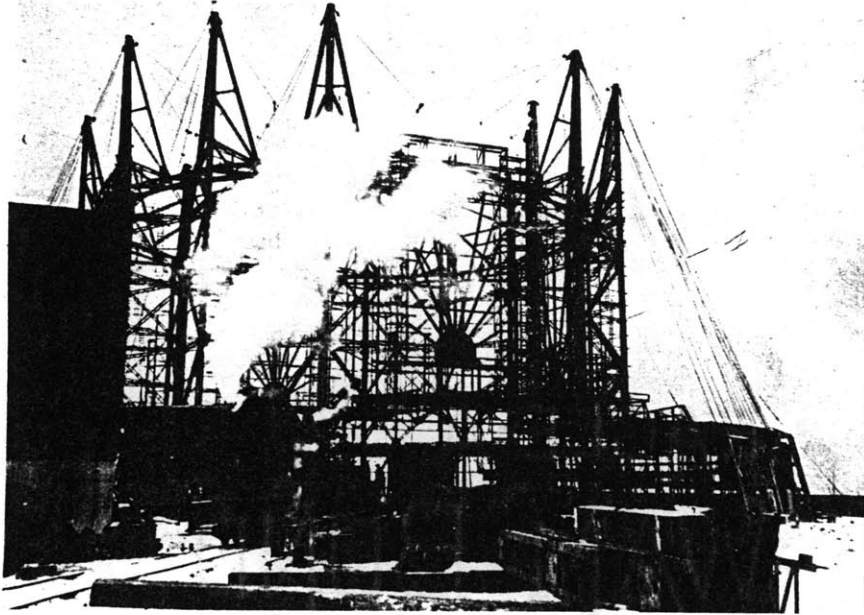
3.139
"Century of Progress Exposition,"
Travel and Transport Building,
Bennett, Burnham and Holabird,
construction view (AF 55 (October
1931): p. 502).
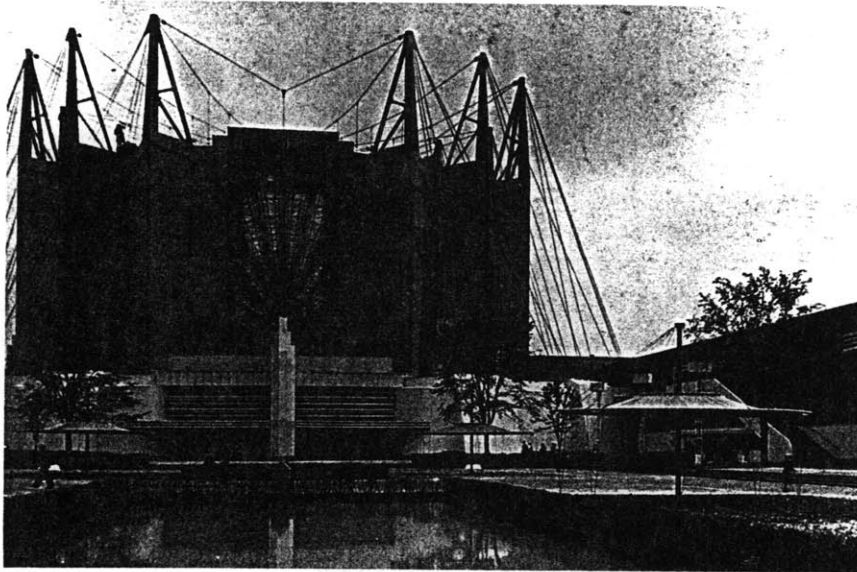
3.140
Travel and Transport Building (AF
59 (July 1933): pp. 21ff).
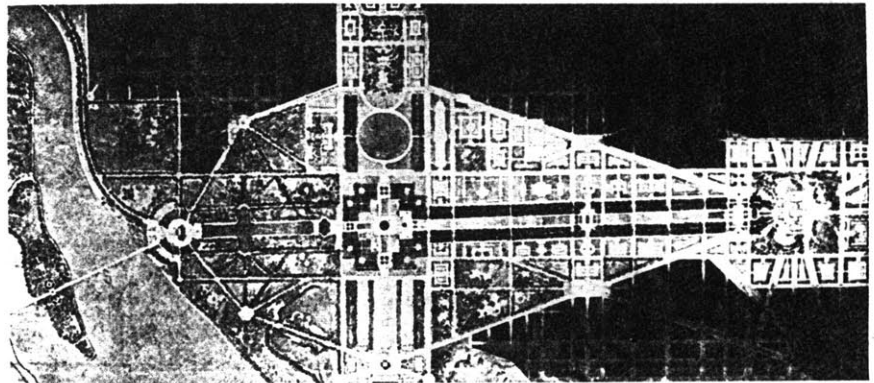
4.1

Plan for Washington D.C. by Senate Parks Commission, Charles McKim et al, 1901 (George Ford, ed., City Planning Progress in the United States (Washington DC, 1917), p. 184).

4.2a

Plan for Chicago, Daniel Burnham et al, 1909 (Art Institute of Chicago, The Plan of Chicago: 1909-1979 (Chicago, 1979), fig. 129).
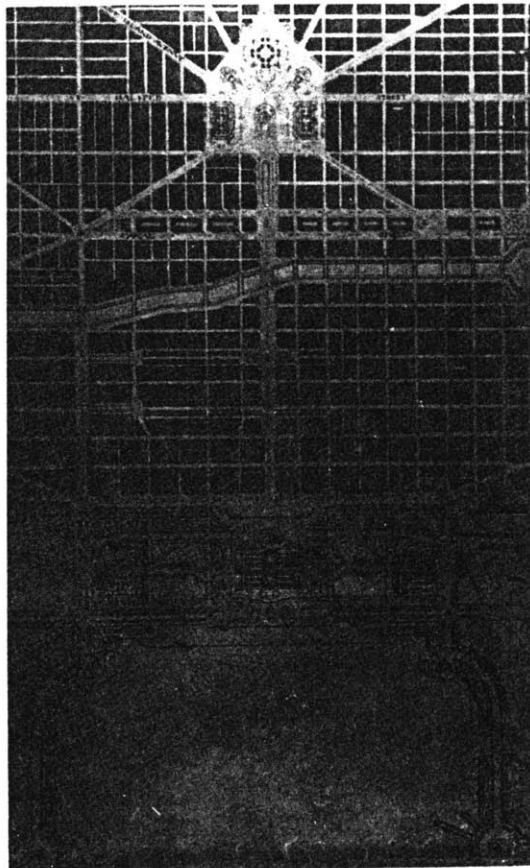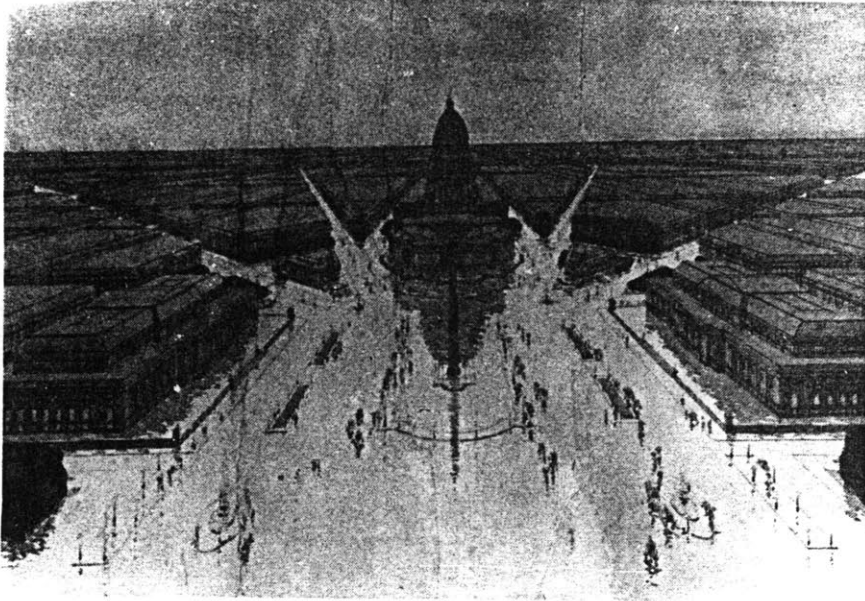
4.2b
Plan for Chicago, Daniel Burnham
et al., 1909 (Art Institute of Chicago,
The Plan of Chicago: 1909-1979
(Chicago, 1979), fig. 132)
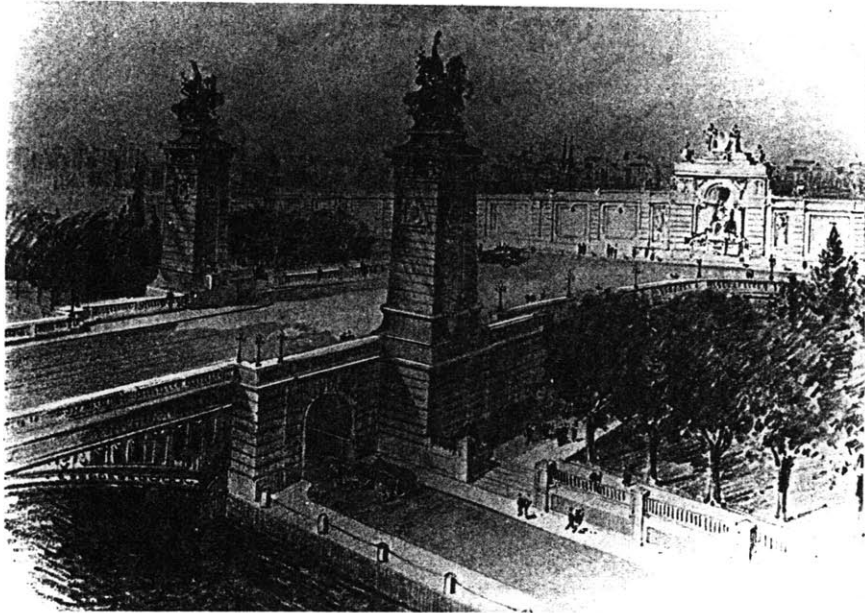
4.3a
Proposal for an entry, Riverfront
Improvement Plan, Albany, NY,
Brunner and Lay, ca. 1911 (George
Ford, ed., City Planning Progress in
the United States (Washington DC,
1917), p. 6).

4.3b
Riverfront Improvement Plan,
Albany, NY (George Ford, ed., City
Planning Progress in the United
States (Washington DC, 1917), p. 7).

4.4
Capital Approach, proposed plan for
Saint Paul, MN, Cass Gilbert
(George Ford, ed., City Planning
Progress in the United States
(Washington DC, 1917), p. 159).

PLAN
OF
THE PARKWAY
FROM
CITY HALL TO FAIRMOUNT PARK
PHILADELPHIA
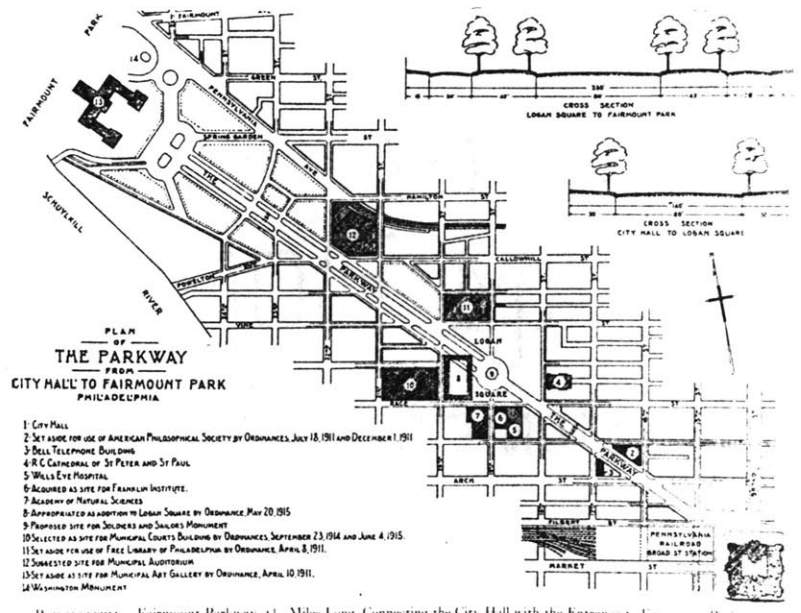
1· City Hall
2· Set aside for use of American Philosophical Society by Ordinances July 18, 1911 and December 1, 1911
3· Bell Telephone Building
4· R C Cathedral of St Peter and St Paul
5· Wills Eye Hospital
6· Acquired as site for Franklin Institute.
7· Academy of Natural Sciences
8· Appropriated as addition to Logan Square by Ordinance May 20, 1915
9· Proposed site for Soldiers and Sailors Monument
10· Selected as site for Municipal Courts Building by Ordinances September 23, 1914 and June 4, 1915.
11· Set aside for use of Free Library of Philadelphia by Ordinance April 8, 1911.
12· Suggested site for Municipal Auditorium
13· Set aside as site for Municipal Art Gallery by Ordinance April 10, 1911.
14· Washington Monument

Philadelphia. Fairmount Parkway, 1¼ Miles Long, Connecting the City Hall with the Entrance to Fairmount Park.
At the latter terminus the Art Museum is about to be erected.

4.5
Proposal for the Fairmount Parkway, Parkway Association, Philadelphia, ca. 1902 (George Ford, ed., City Planning Progress in the United States (Washington DC, 1917), p. 138).

4.6a
Forest Park, Saint Louis, MO, Cass Gilbert (George Ford, ed., City Planning Progress in the United States (Washington DC, 1917), p. 156).
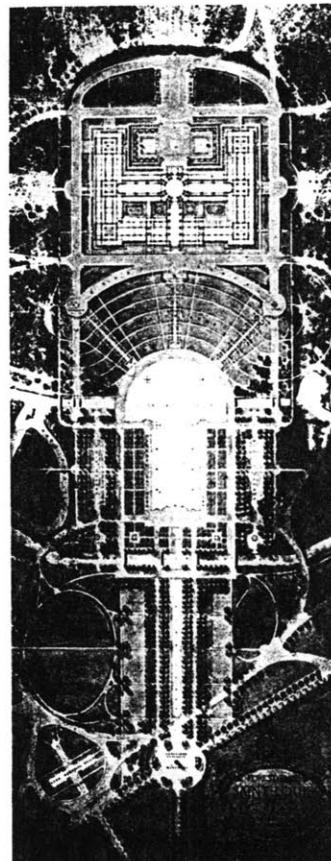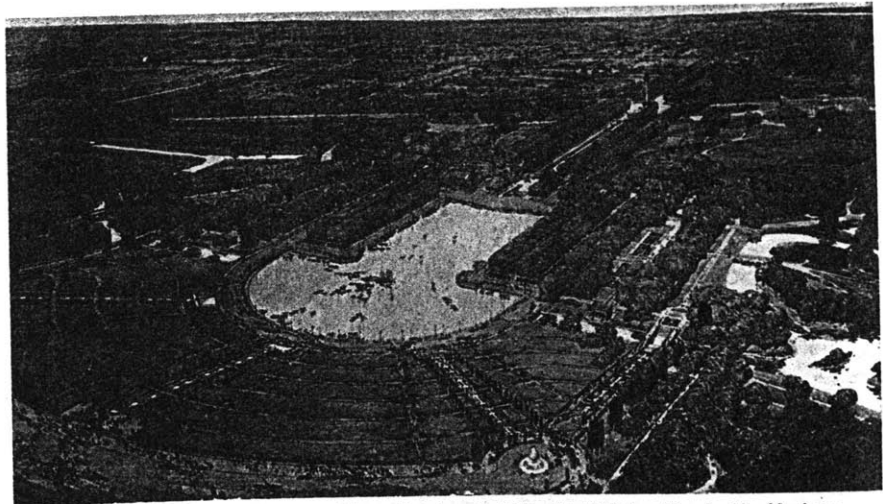
St. Louis.—Proposed Development of Forest Park from Art Hill to Lindell Drive. View Looking Northeast.

4.6b
Forest Park, Saint Louis, MO, Cass Gilbert (George Ford, ed., <u>City Planning Progress in the United States</u> (Washington DC, 1917), p. 158).

4.7
Colonnade/Gateway into city of Minneapolis, MN by Hewitt and Brown (George Ford, ed., <u>City Planning Progress in the United States</u> (Washington DC, 1917), p. 103).
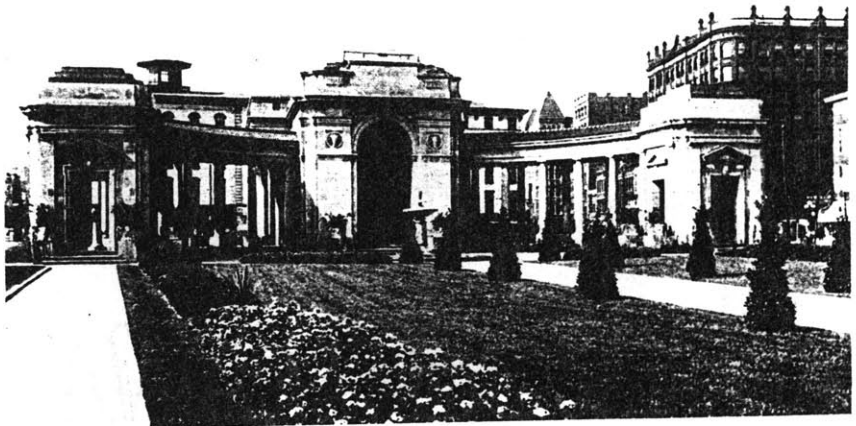
4.8
Proposal for the Civic Group in
Milwaukee, WI (George Ford, ed.,
City Planning Progress in the United
States (Washington DC, 1917), p.
99).

4.9a
Proposal for the Civic Group in
Seattle, WA, Virgil Bogue, ca. 1911
(George Ford, ed., City Planning
Progress in the United States
(Washington DC, 1917), pp. 170ff).
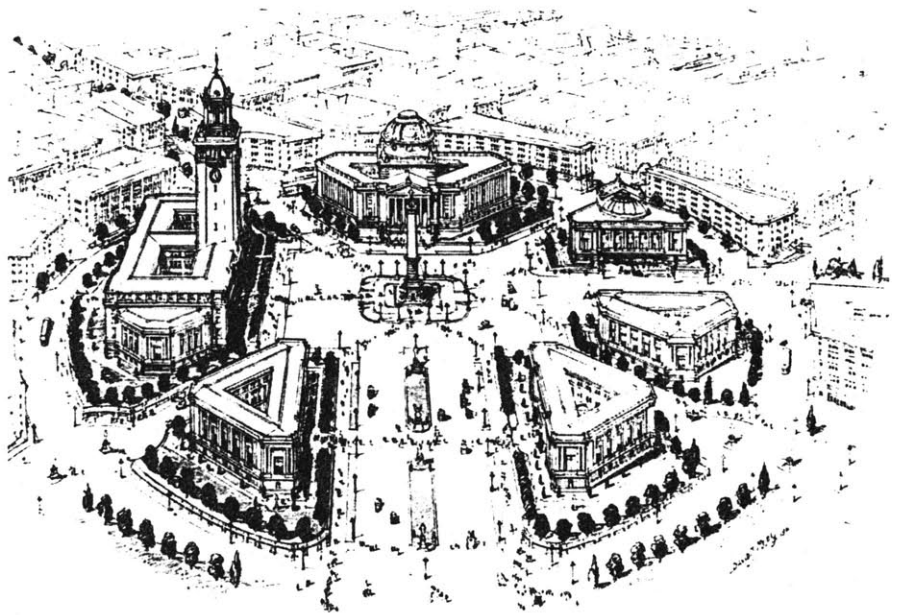
4.9b
Proposal for Seattle (George Ford, ed., City Planning Progress in the United States (Washington DC, 1917), pp. 170ff).

4.9c
Proposal for Seattle (George Ford, ed., City Planning Progress in the United States (Washington DC, 1917), pp. 170ff).
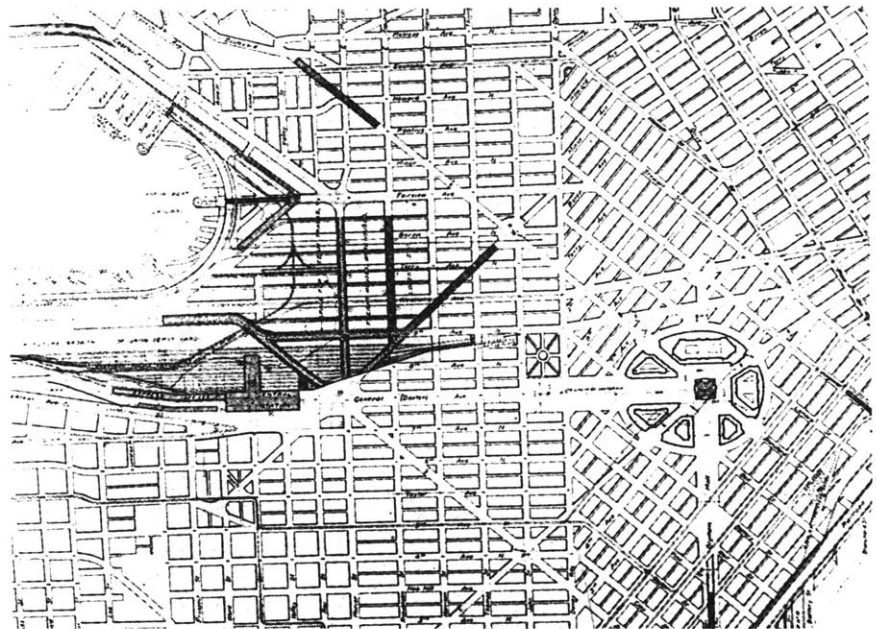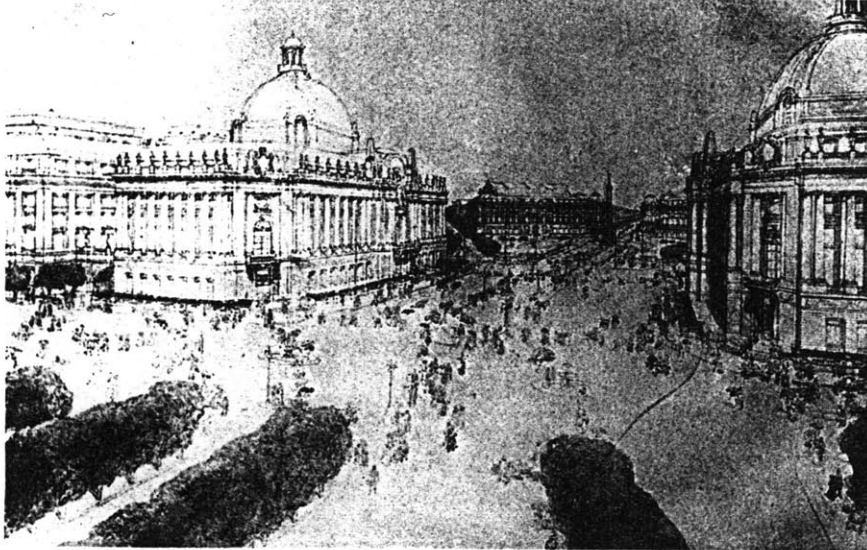
4.10a
Proposal for the Civic Group in Minneapolis, MN, Edward Bennett, ca. 1917 (George Ford, ed., City Planning Progress in the United States (Washington DC, 1917), pp. 101ff).
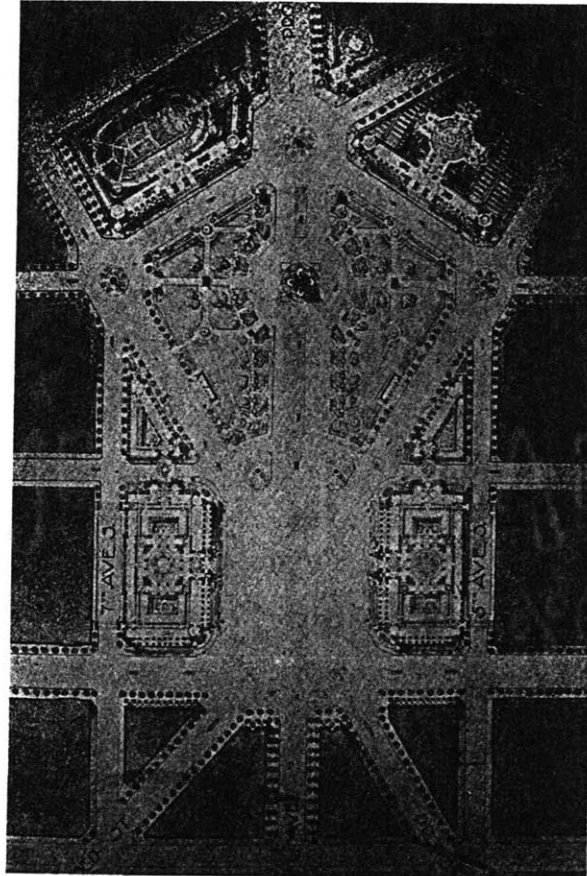
4.10b
Proposal for Minneapolis (George Ford, ed., City Planning Progress in the United States (Washington DC, 1917), p. 101ff).
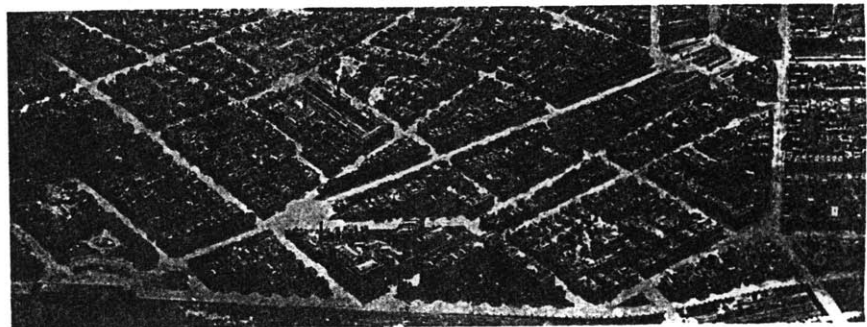
4.11

Proposal for a new boulevard, Civic Improvement Commission, New Haven, CT, Cass Gilbert and Frederick Law Olmsted, ca. 1910 (George Ford, ed., City Planning Progress in the United States (Washington DC, 1917), p. 114).
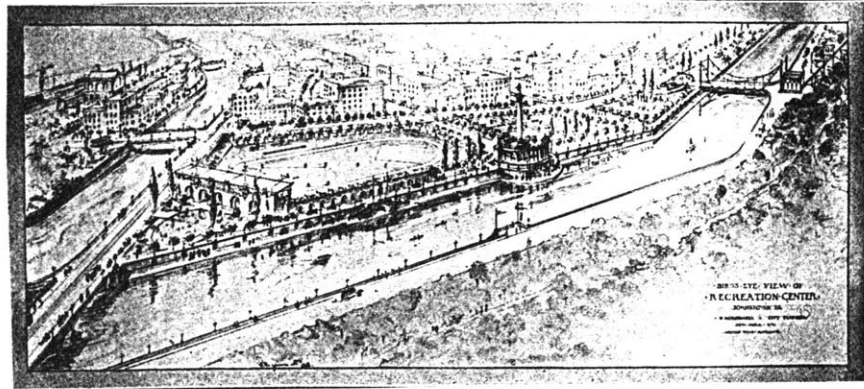
4.12

Proposal for a riverside park for Johnstown, PA, Hornbostle and Wild, ca. 1917 (George Ford, ed., City Planning Progress in the United States (Washington DC, 1917), p. 79).
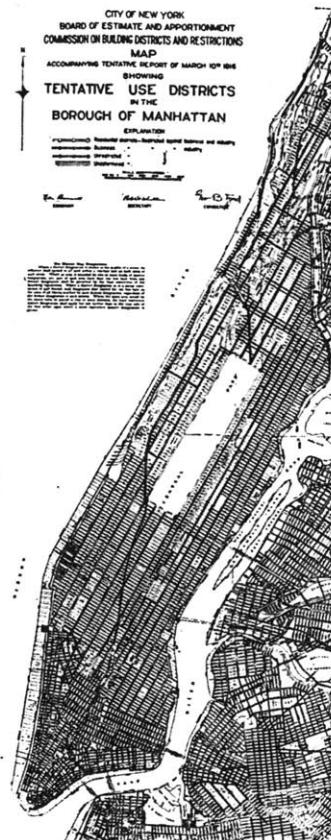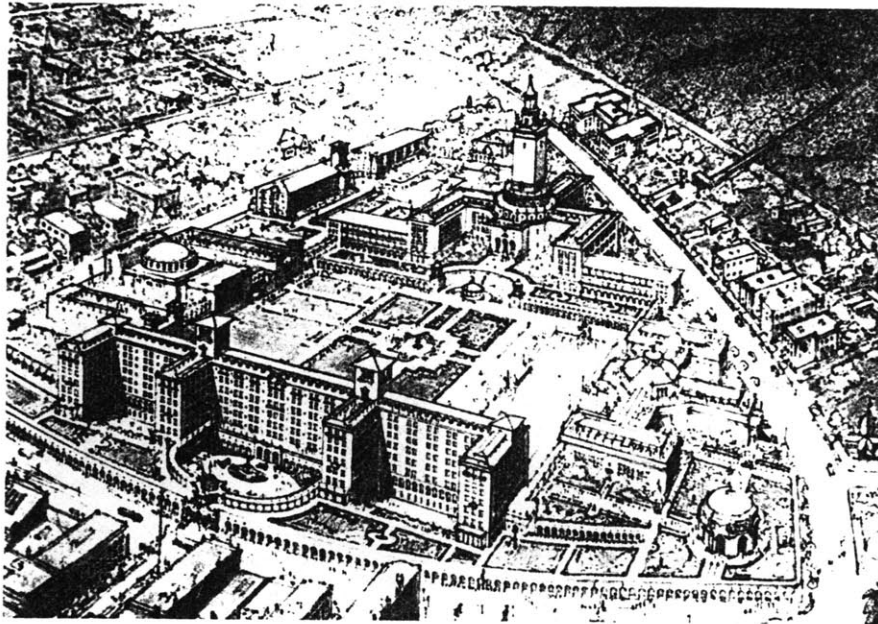
4.13
Proposal for a civic group for Hot Springs, AR (George Ford, ed., City Planning Progress in the United States (Washington DC, 1917), p. 75).

4.14
Tentative Use Districts, Zoning Ordinance, New York City, ca. 1916 (George Ford, ed., City Planning Progress in the United States (Washington DC, 1917), p. 121).

CITY OF NEW YORK
BOARD OF ESTIMATE AND APPORTIONMENT
COMMISSION ON BUILDING DISTRICTS AND RESTRICTIONS
MAP
ACCOMPANYING TENTATIVE REPORT OF MARCH 10ᵀᴴ 1916
SHOWING
TENTATIVE AREA DISTRICTS
IN THE
BOROUGH OF MANHATTAN
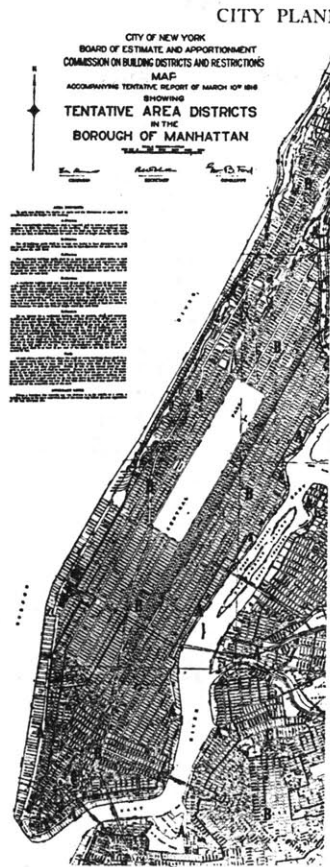
4.15
Tentative Area Districts, Zoning
Ordinance, New York City, ca. 1916
(George Ford, ed., City Planning
Progress in the United States
(Washington DC, 1917), p. 123).
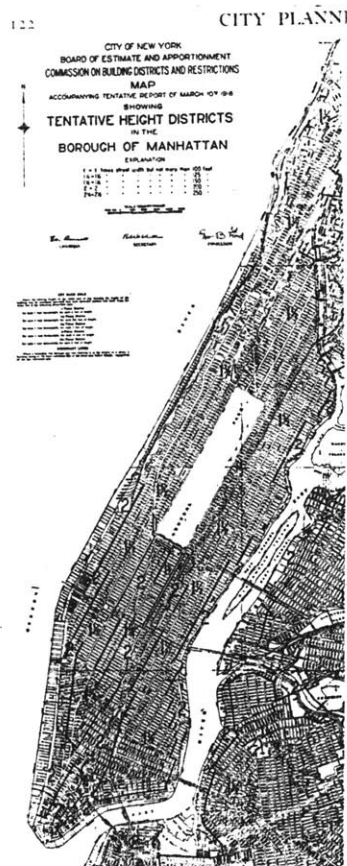
4.16
Tentative Height Districts, Zoning
Ordinance, New York City, ca. 1916
(George Ford, ed., City Planning
Progress in the United States
(Washington DC, 1917), p. 122).

CITY OF NEW YORK
BOARD OF ESTIMATE AND APPORTIONMENT
COMMISSION ON BUILDING DISTRICTS AND RESTRICTIONS
MAP
ACCOMPANYING TENTATIVE REPORT OF MARCH 10ᵀᴴ 1916
SHOWING
TENTATIVE HEIGHT DISTRICTS
IN THE
BOROUGH OF MANHATTAN

NOREG VILLAGE   PLOT PLAN   GLOUCESTER, N. J.

4.17

View of Government Housing, Woolwich, 1915 as illustrated in C.H. Whitaker, et al, The Housing Problem in War and Peace, p. 9.

4.18

Noreg Village, near Gloucester, New Jersey, 1918-19 (U.S. Shipping Board, Emergency Fleet Corporation, Housing the Shipbuilder (Philadelphia, PA, 1920)).
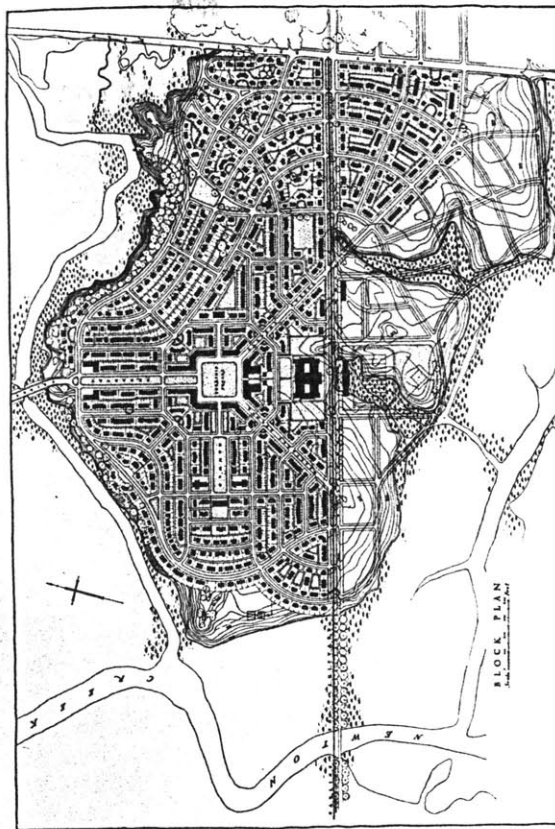
YORKSHIP VILLAGE   PLOT PLAN   CAMDEN, N. J.

4.19

Yorkship Village, near Camden, New Jersey, Electus Litchfield with Pliny Rogers, 1918-19 (U.S. Shipping Board, Emergency Fleet Corporation, Housing the Shipbuilder (Philadelphia, PA, 1920)).

4.20

Housing at Port Jefferson, New York, Alfred Bossom, 1918-19 (U.S. Shipping Board, Emergency Fleet Corporation, Housing the Shipbuilder (Philadelphia, PA, 1920)).

DETACHED HOUSE

Scale Feet

FIRST FLOOR PLAN   SECOND FLOOR PLAN
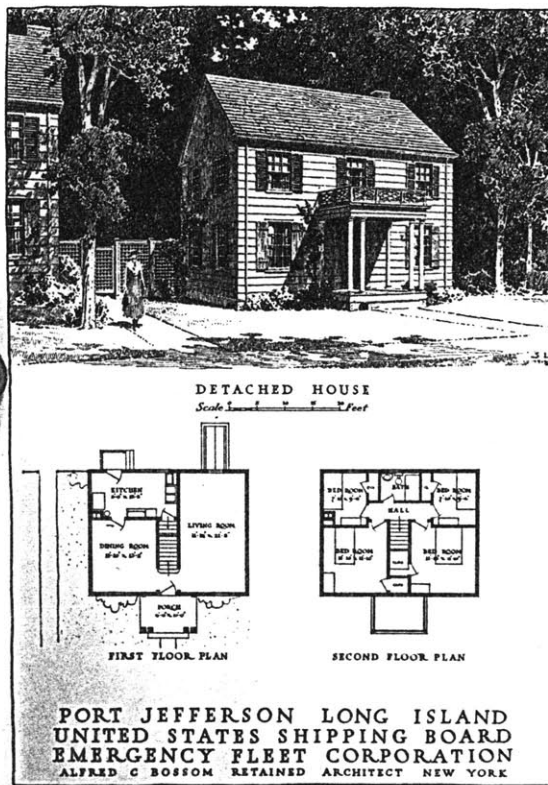
PORT JEFFERSON LONG ISLAND
UNITED STATES SHIPPING BOARD
EMERGENCY FLEET CORPORATION
ALFRED C BOSSOM RETAINED ARCHITECT NEW YORK

501
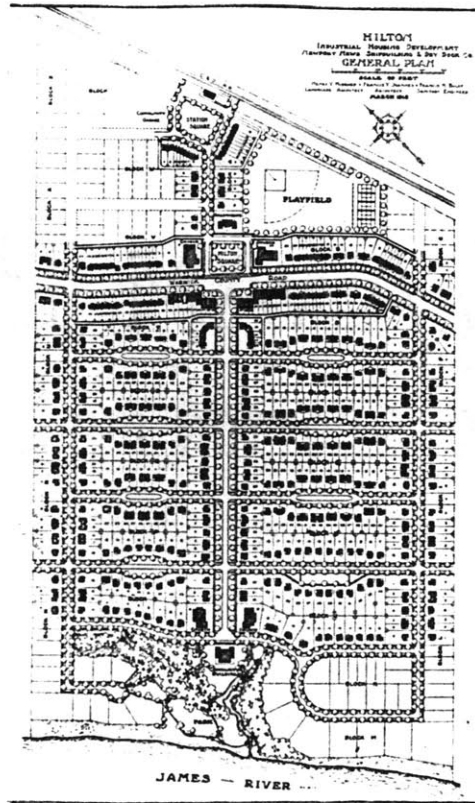
4.21
Hilton Village, near Newport News, VA, Henry Hubbard and Francis Yoannes, 1918-19 (Southern Pine Association, Houses for Workmen: A Presentation of Leading Examples of Industrial Community Development (New Orleans, 1919)
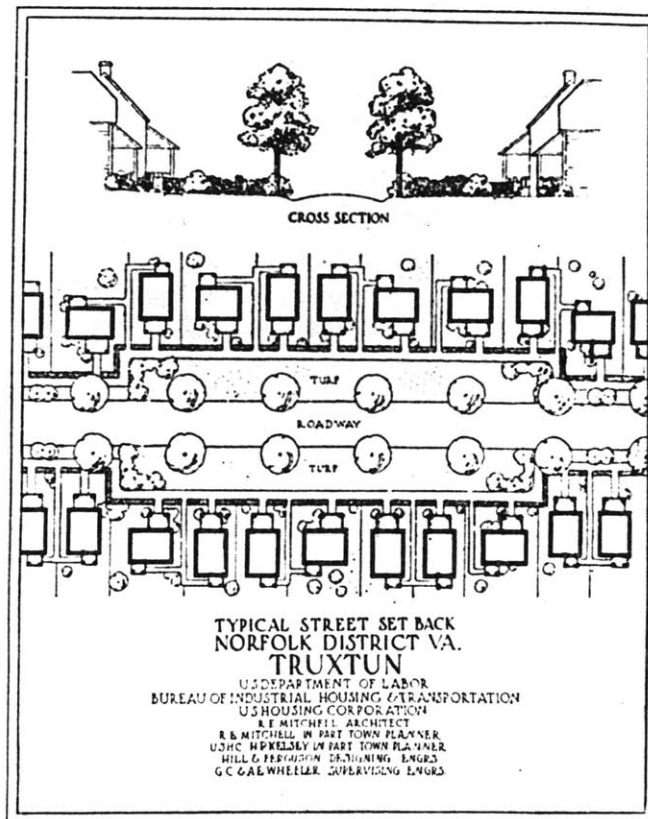
4.22
Plan of house fronts along typical street, Truxton, VA, 1918-19 (U.S. Department of Labor, Report of the United States Housing Corporation, Vol. 2 (Washington DC, 1919), p. 288).

HOUSING DEVELOPMENT
for
THE ATLANTIC CORPORATION
PORTSMOUTH   NEW HAMPSHIRE
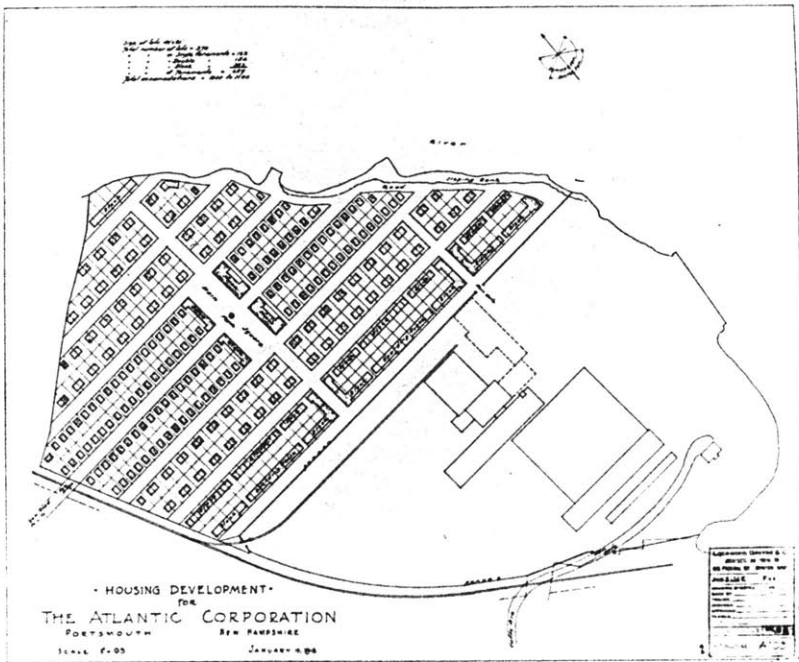
4.23

Plan for Atlantic Heights, ME, prepared by Lockwood Greene and Company, 1918 (Richard Candee, Atlantic Heights: A Word War I Shipbuilder's Community (Portsmouth, NH, 1985), p. 53)

4.24

Atlantic Heights, plan prepared by Kilham and Hopkins, 1918-19 (U.S. Shipping Board, Emergency Fleet Corporation, Housing the Shipbuilder (Philadelphia, PA, 1920)).

BLOCK PLAN
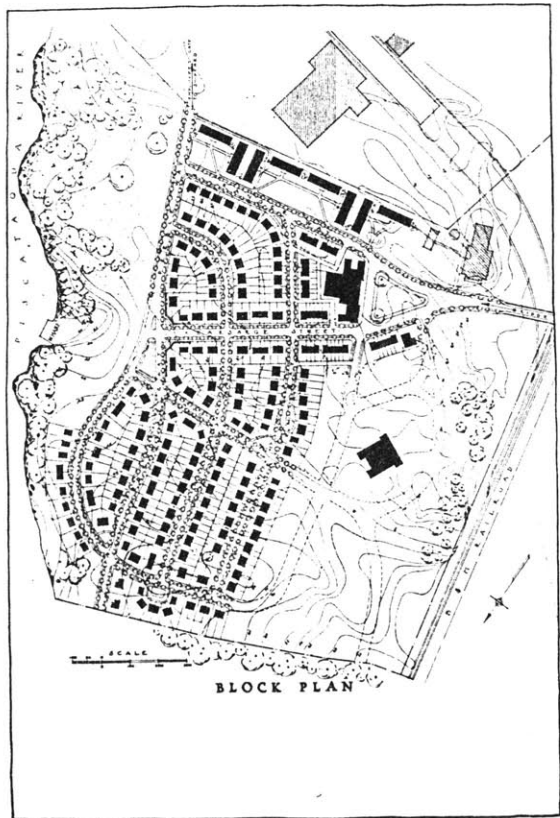
ATLANTIC HEIGHTS   PLOT PLAN   PORTSMOUTH, N. H.

503

ATLANTIC HEIGHTS PORTSMOUTH N H
UNITED STATES SHIPPING BOARD
EMERGENCY FLEET CORPORATION
KILHAM & HOPKINS RETAINED ARCHITECTS BOSTON MASS

STREET GROUP

BLOCK PLAN

ATLANTIC HEIGHTS PORTSMOUTH N H
UNITED STATES SHIPPING BOARD
EMERGENCY FLEET CORPORATION
KILHAM & HOPKINS RETAINED ARCHITECTS BOSTON MASS
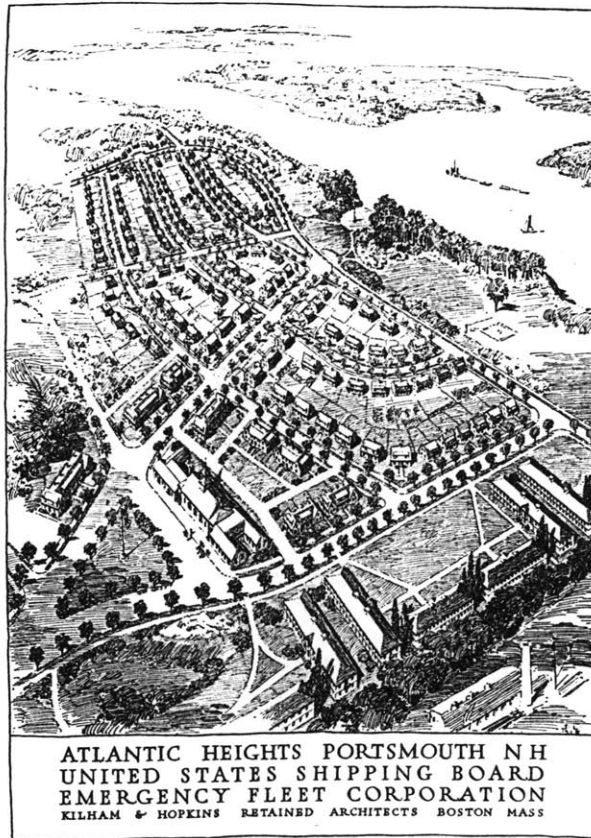
4.25
Atlantic Heights, aerial perspective of plan prepared by Kilham and Hopkins, 1918 (U.S. Shipping Board, Emergency Fleet Corporation, Housing the Shipbuilder (Philadelphia, PA, 1920)).
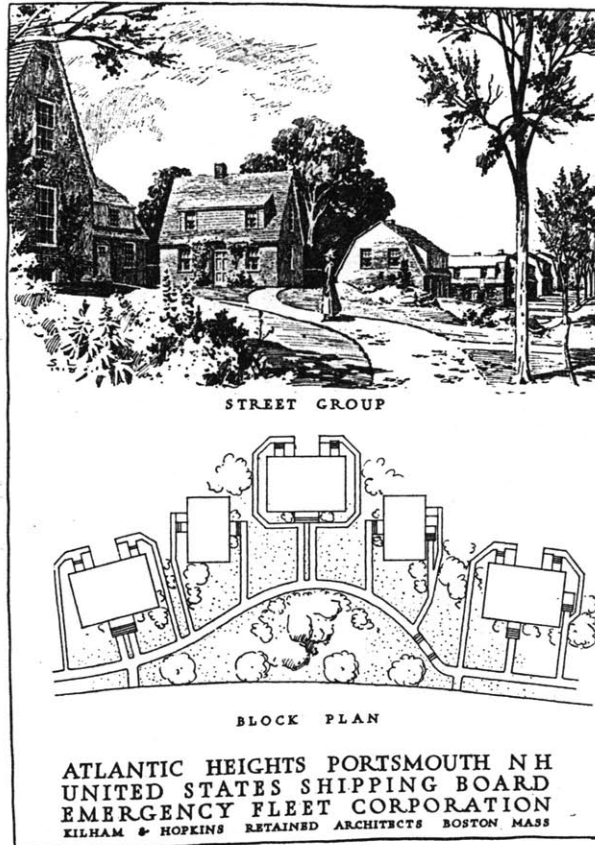
4.26
Atlantic Heights, plan and perspective showing houses grouped around a pre-existing landform prepared by Kilham and Hopkins, 1918 (U.S, Shipping Board, Emergency Fleet Corporation, Types of Housing for Shipbuilders (Philadelphia, PA, 1919)).

FRONT ELEVATION

FRONT ELEVATION

FLOOR PLAN

FLOOR PLAN

4.27

Housing types at Nitro, West Virginia, Graham, Anderson, Probst and White, ca. 1918 (Southern Pine Association, Houses for Workmen: A Presentation of Leading Examples of Industrial Community Development (New Orleans, 1919), p. 83).

4.28a

Advertising for the ASHSB plan services reproduced in AIAJ 10 (January 1922): p. 15.
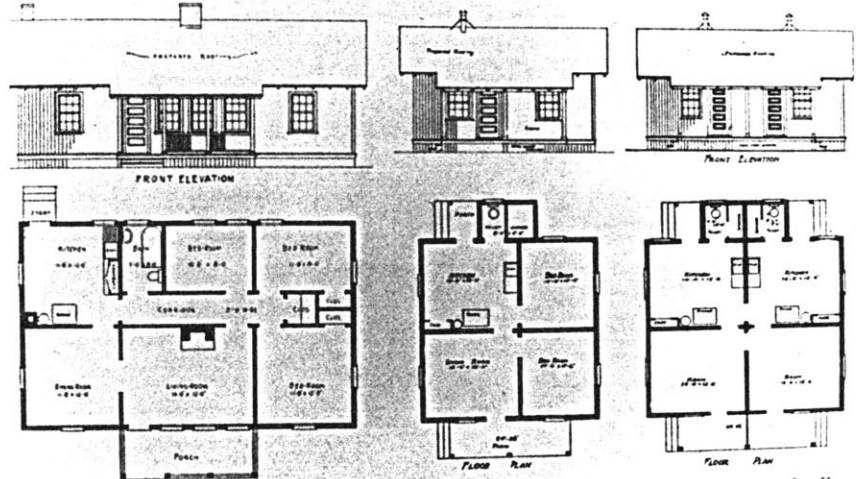
HELP FOR THE MAN WHO WANTS TO BUILD

HOW MUCH CAN YOU AFFORD TO PUT IN A HOME?

DUTCH COLONIAL—MANY FEATURES

WHATEVER YOU WANT TO KNOW ABOUT BUILDING

FIRST FLOOR

SECOND FLOOR

WORKING DRAWING SHEET—SMALL HOUSE BUREAU
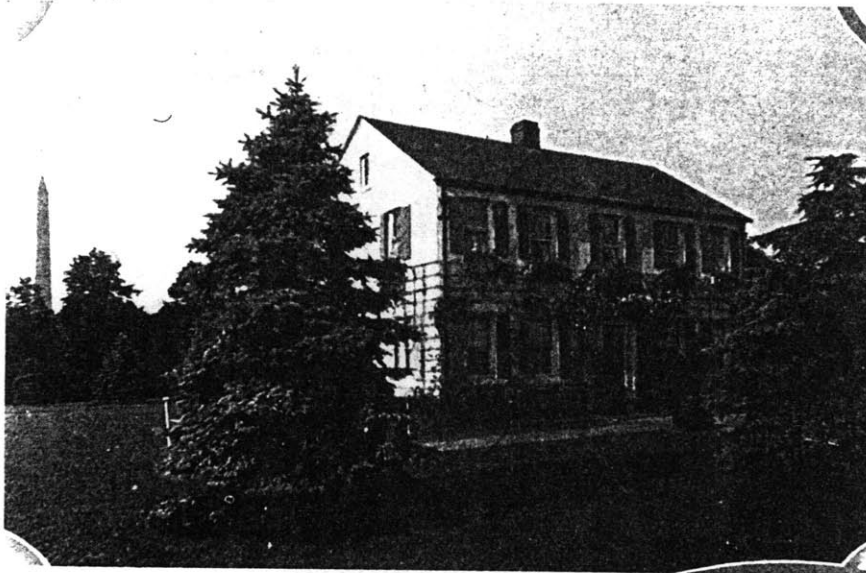
4.28b
Typical Working Drawing Sheet,
ASHSB (AIAJ 9 (April 1921): p.
137).

4.29a
Replica of John Howard Paine
House erected on Washington Mall,
Donn Barber, ca. 1923 (The Book of
a Thousand Homes (New York,
1923)).

4.29b
Herbert Hoover and Marie Meloney
at ground breaking for the John
Howard Paine House (The Book of
a Thousand Homes (New York,
1923)).

4.30
Cartoon depicting homeowners
suffering from incompatible
activities of industry on adjacent
property, from Evansville Courier &
Journal reprinted in Theodora
Kimball and Henry Hubbard, Our
Cities, Today and Tomorrow: A
Survey of Planning and Zoning
Progress in the United States
(Cambridge, MA, 1929).

Zoning Will Prevent This

Courtesy of Evansville Courier and Journal

**A Cartoon used in the Zoning Publicity Campaign
at Evansville, Indiana**

AN APPEAL TO THE PUBLIC

Is the Skyscraper

By HENRY JAMES

Consultant on Special Problems, Committee on Regional Plan
of New York and its Environs

THE BOOK TOWER—PRIDE OF DETROIT
This huge structure will be 85 stories high, or 25 stories higher than the Woolworth Building. What will happen to traffic in its neighborhood?

PITTSBURGH'S CATHEDRAL OF LEARNING
Centralization of the University of Pittsburgh's activities will be achieved in this 52-story edifice, which should be completed in three years.

4.31
Industrial Trust Building, Providence, RI, Walker and Weeks, ca. 1928 (AF 50 (May 1929): pp. 637ff).

4.32a
"Is the Skyscraper a Public Nuisance," by Henry James, World's Work, 54 (May 1927)(verso).

A Public Nuisance?
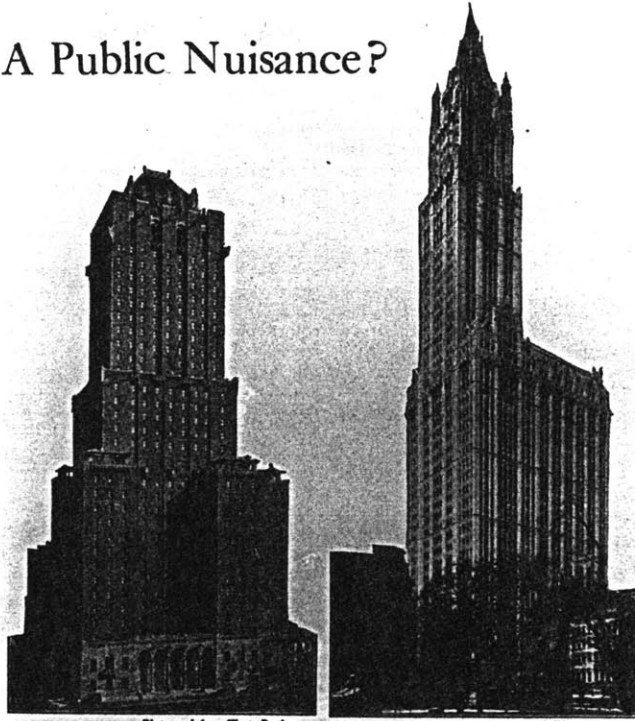
Photograph from Wurts Brothers

ONE OF THE WORLD'S TALLEST HOTELS
The beauty of the Hotel Shelton, New York, winner of the Architectural League's first prize in 1925, is obscured by surrounding tall buildings.

© Wurts Brothers

THE PEAK OF NEW YORK'S SKYLINE
Although its supremacy is threatened, the Woolworth Building, with its 60 stories and height of 792 feet, is still the world's highest building.

4.32b
"Is the Skyscraper a Public Nuisance" (recto).

4.33
Aerial view of Grand Central Station district, New York, NY, showing Shelton Hotel, Arthur Harmon, 1923-24, included in Edward Rush Duer, "The Skyscraper in New York," AF 42 (February 1926): p. 105.
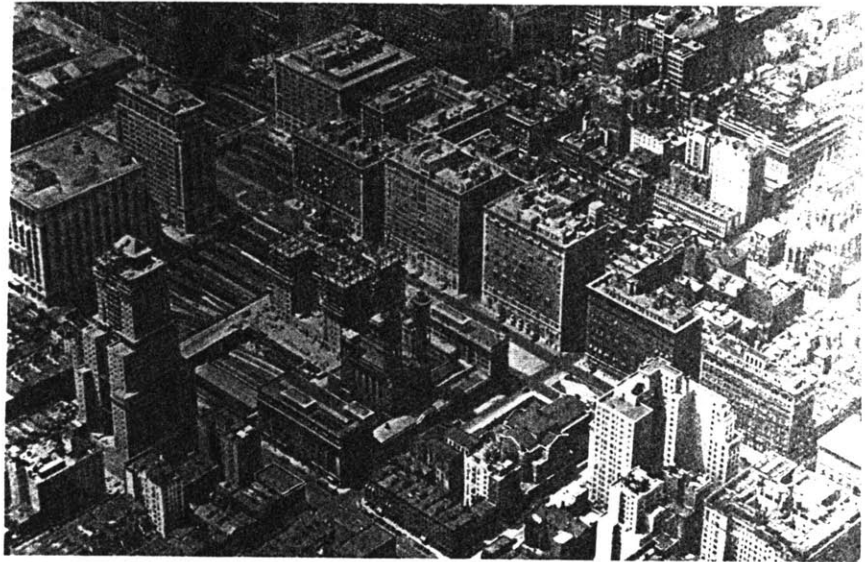
4.34
View of Radiator Building, New
York, NY, Raymond Hood, 1924, as
illustrated in Edward Rush Duer,
"The Skyscraper in New York," AF
42 (February 1926): p. 106.

4.35
Barclay Vesey Building, New York,
NY, Voorhees, Gmelin and Smith
(Ralph Walker, designer) 1923-6
(Ralph Walker, Ralph Walker,
Architect (New York 1957)).
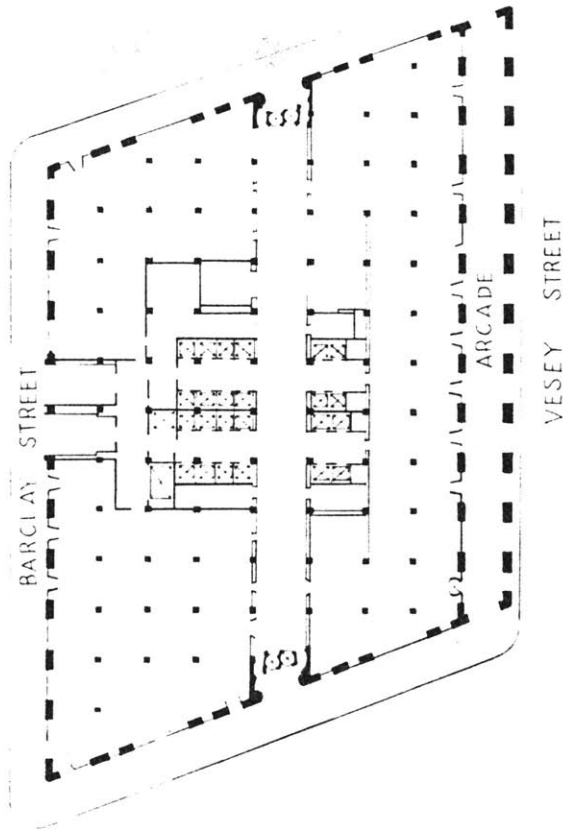
4.36
Barclay Vesey Building, plan (Ralph Walker, <u>Ralph Walker, Architect</u> (New York 1957)).

4.37
View of flood plain around Los Angeles, prepared for the First Regional Plan Conference at Los Angeles County, January, 21, 1922 (<u>Proceedings of the First Regional Plan Conference at Los Angeles County, California</u> (Pasadena, CA), 21 January 1922).

FOR FULL WATER CONSERVATION · A REGIONAL PLAN FOR FLOOD CONTROL

MAP OF
NEW YORK AND ITS ENVIRONS

	AREA	1920 POPULATION
NEW YORK CITY	298 SQ.MI.	5,620,048
NEW JERSEY	2,220 SQ MI	2,346,850
N.Y. STATE OUTSIDE N.Y. CITY	2,597 SQ MI	721,449
CONNECTICUT	413 SQ MI	290,708
TOTAL	5,528 SQ MI	8,979,055

Photo by Edwin Levick

STREET CONGESTION AT INTERSECTIONS
Vehicular and pedestrian traffic at Fifth Avenue and 42d Street, Manhattan.

4.38
Map of terrain encompassed by the
Regional Plan of New York
(Committee on the Regional Plan of
New York and Its Environs, The
Graphic Regional Plan (New York,
1929), p. 21).

4.39
Traffic congestion at street
intersection, New York City,
illustrated in Committee on the
Regional Plan of New York and Its
Environs, The Graphic Regional
Plan (New York, 1929), p. 136.
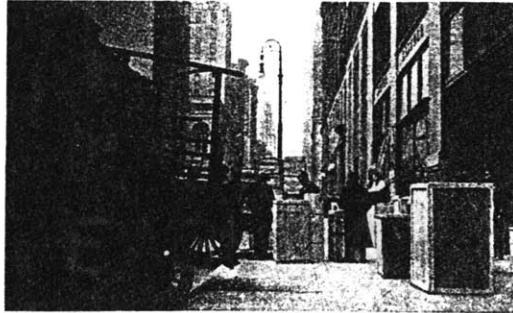
FIG. 53
STREETS AND SIDEWALKS BLOCKED BY TRUCKS UNLOADING AT THE CURB
Typical views in wholesale district, borough of Manhattan, New York
City.

4.40

Streets blocked by trucks unloading
at the curb, New York City,
illustrated in Harold Lewis, Regional
Plan Survey, v. III: Report on
Highway Traffic (New York, 1927).

4.41

"The Present Condition," by Harvey
Wiley Corbett, drawn by Hugh
Ferriss published in Harvey Wiley
Corbett, "The Problem of Traffic
Congestion and a Solution," AF 46
(March 1927): pp. 200-8 (also used in
Thomas Adams, The Building of the
City (New York, 1931), p. 307).
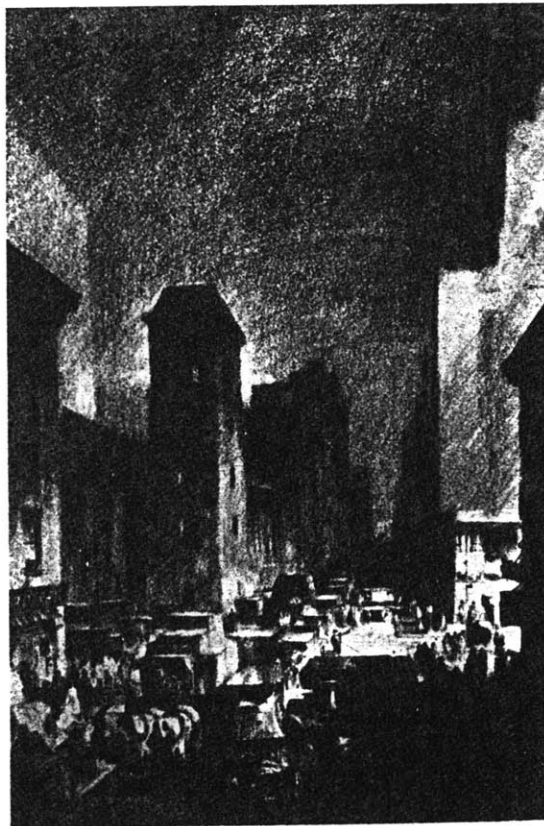
Present Condition of Traffic Congestion

FIG. 817—CHESTER; FIG. 818—ST. LO;
FIG. 819—THUN. COVERED SIDE-
WALKS ABOVE STREET GRADE
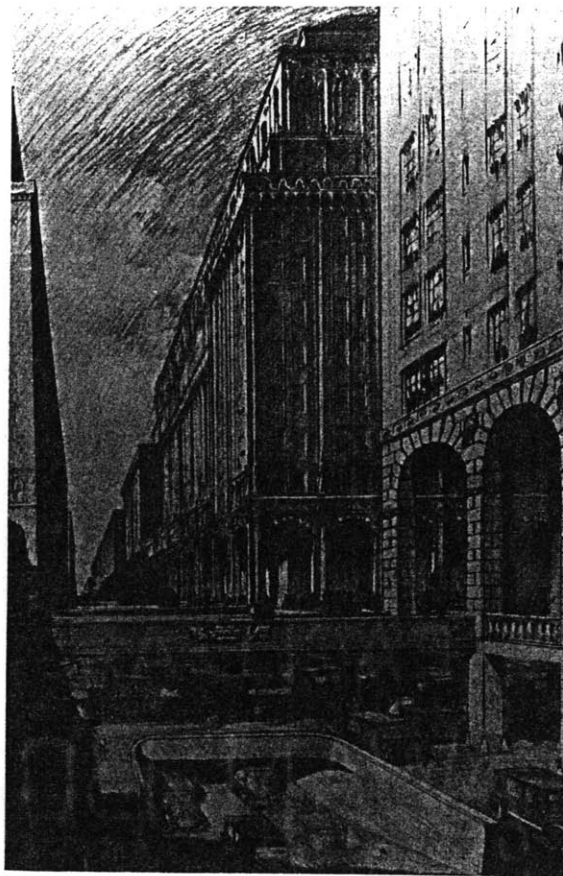
4.42

Drawing showing city street traffic improved by arcades and two level circulation, Harvey Wiley Corbett, executed by Hugh Ferriss published in (Harvey Wiley Corbett, "The Problem of Traffic Congestion and a Solution," AF 46 (March 1927): pp. 200-8.
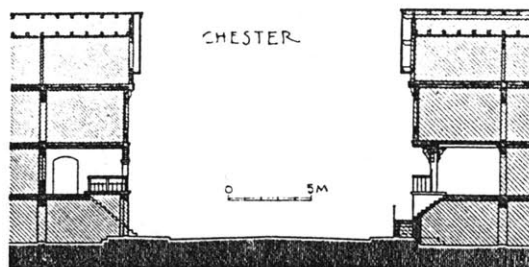
4.43

Street sections depicting separation of pedestrian and vehicular traffic in European cities of Chester, St. Lo and Thun from Werner Hegemann and Elbert Peets, American Vitruvius: An Architect's Handbook fo Civic Art (New York, 1922), p. 191.

4.44
Railroad Station at Forest Hills
Gardens near New York City
showing two level traffic illustrated
in Werner Hegemann and Elbert
Peets, American Vitruvius: An
Architect's Handbook fo Civic Art
(New York, 1922), p. 197.

4.45
Interior driveway at Pennsylvania
Station showing two level traffic
illustrated in Werner Hegemann and
Elbert Peets, American Vitruvius:
An Architect's Handbook fo Civic
Art (New York, 1922), p. 197.
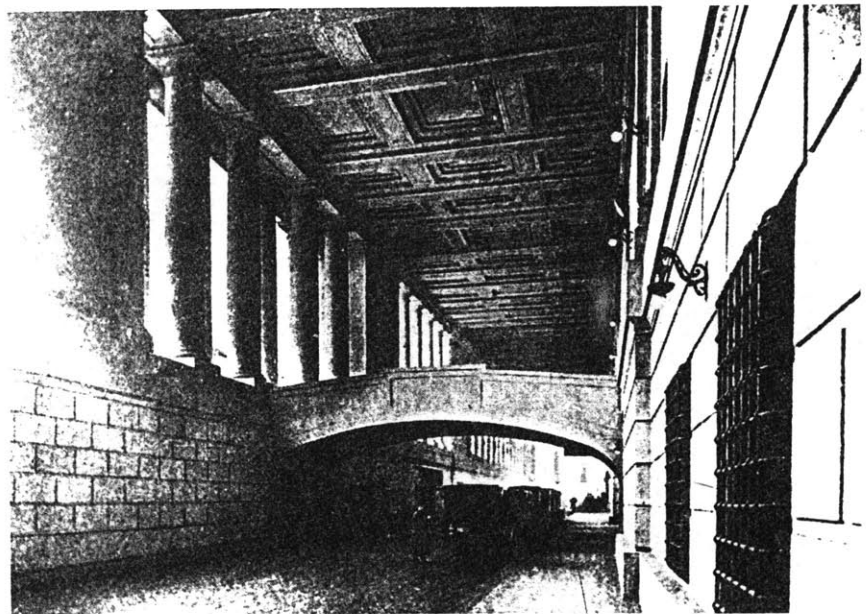
4.46a
View of Grand Central Station showing train tracks beneath new urban street pattern prior to the construction of buildings above illustrated in Nelson Lewis, The Planning of the Modern City (New York, 1923).
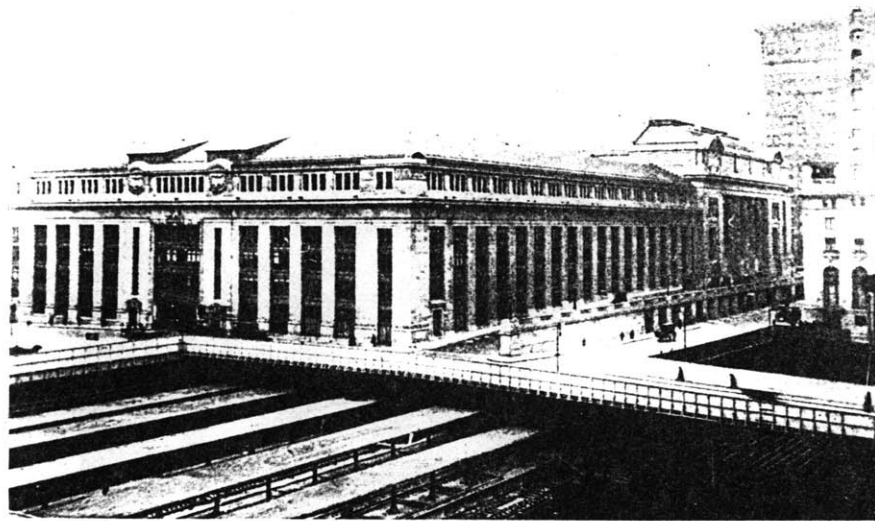
4.46b
View of Grand Central Station showing train tracks beneath new urban street pattern prior to the construction of buildings above illustrated in Nelson Lewis, The Planning of the Modern City (New York, 1923).

4.47
View showing elevated level of
automobile traffic at Grand Central
Station (Thomas Adams, The
Building of the City (New York,
1931), p. 284).

4.48
Proposal by Ernest Flagg for
elevated roadways illustrated in
Thomas Adams, The Building of the
City (New York, 1931), p. 314.

Illustration No. 5

4.49
Proposal for New York City street improvement illustrated in John Harris, "Report of Subcommittee on Traffic Regulations and Street Uses," in M. O'Brien et al, <u>Report of the City Committee on Plan and Survey</u> (New York, 1928).

4.50
Proposal for double-decker road for Chicago, illustrated in <u>CT</u>, 27 May 1928.
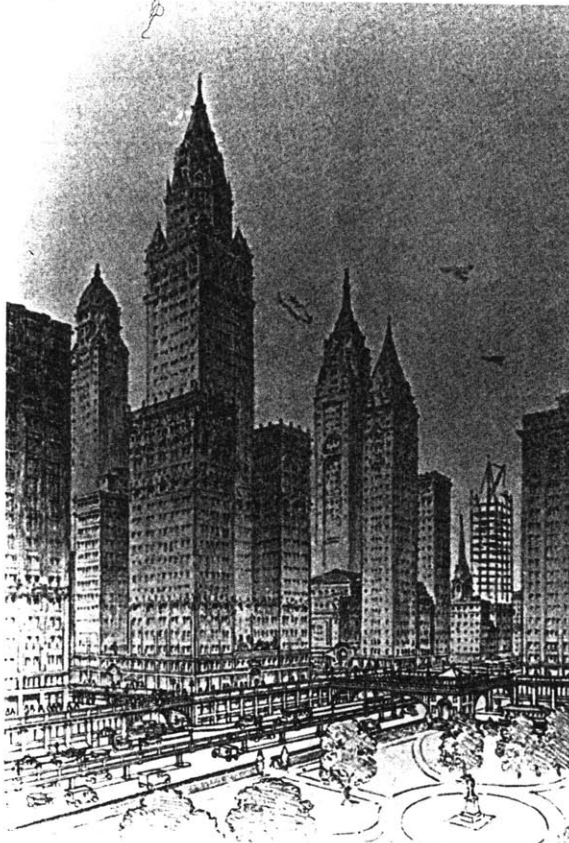
4.51
"Two level street improvement,"
showing Michigan Avenue in
Chicago illustrated in Theodora
Kimball and Henry Hubbard, Our
Cities, Today and Tomorrow: A
Survey of Planning and Zoning
Progress in the United States
(Cambridge, MA, 1929).

4.52
"Present Condition on an Average
Street," depicted by Hugh Ferriss.
These studies were overseen by
Harvey Wiley Corbett and showed
the gradual change of street
configurations as a consequence of a
zoning ordinance conceived by
Corbett that called for two-level
traffic and arcades (Harvey Wiley
Corbett, "The Problem of Traffic
Congestion and a Solution," AF 46
(March 1927): pp. 200-8; previously
published in Corbett, "Different
Levels for Foot, Wheel and Rail,"
American City Magazine 31 (July,
1924): pp. 2-7.
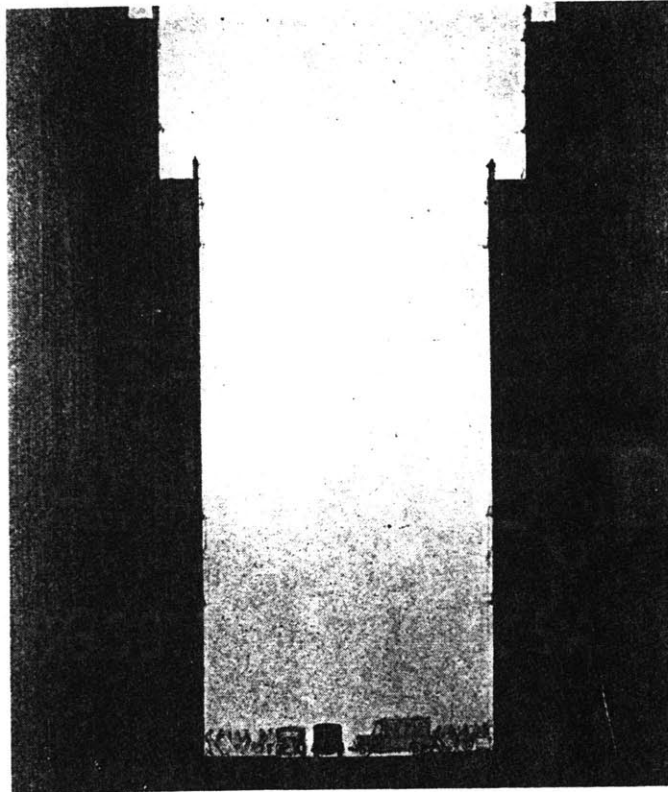
Present Condition on an Average Street

First Step toward Improvement
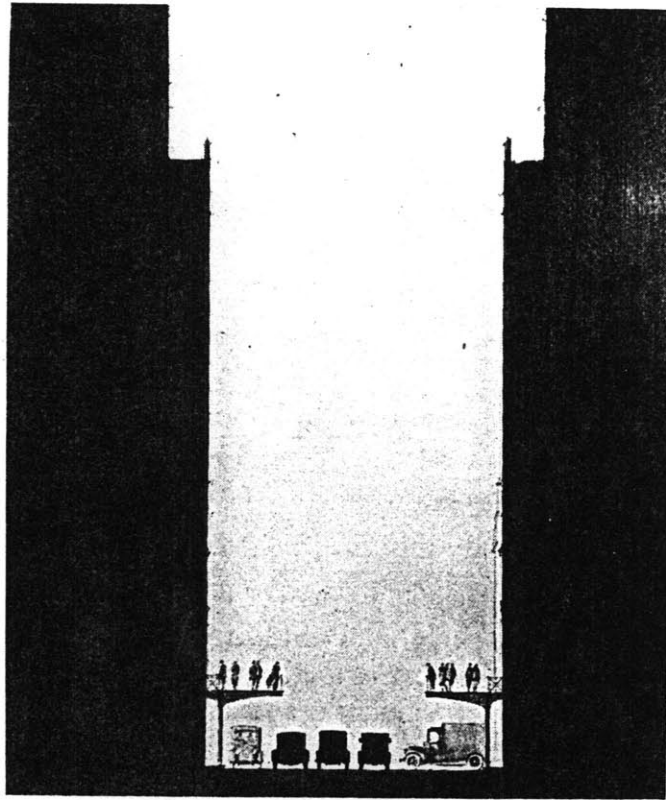
Parking Space Provided beneath Buildings

4.53
"First Step Toward Improvement"
(Harvey Wiley Corbett, "The
Problem of Traffic Congestion and a
Solution," AF 46 (March 1927): p.
202)

4.54
"Parking Spaces Provided Beneath
Buildings" (Harvey Wiley Corbett,
"The Problem of Traffic Congestion
and a Solution," AF 46 (March
1927): p. 203).
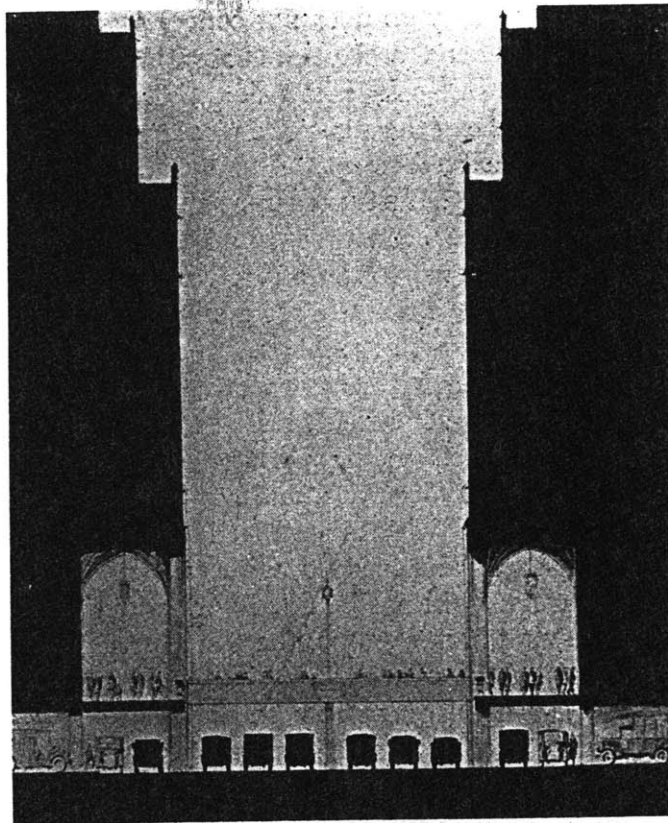
Arcaded Sidewalks within Buildings

4.55

"Arcaded Sidewalks within
Buildings" (Harvey Wiley Corbett,
"The Problem of Traffic Congestion
and a Solution," AF 46 (March
1927): p. 203).

4.56

"Elevated Sidewalks Provide Wider
Walkways" (Harvey Wiley Corbett,
"The Problem of Traffic Congestion
and a Solution," AF 46 (March
1927): p. 203).
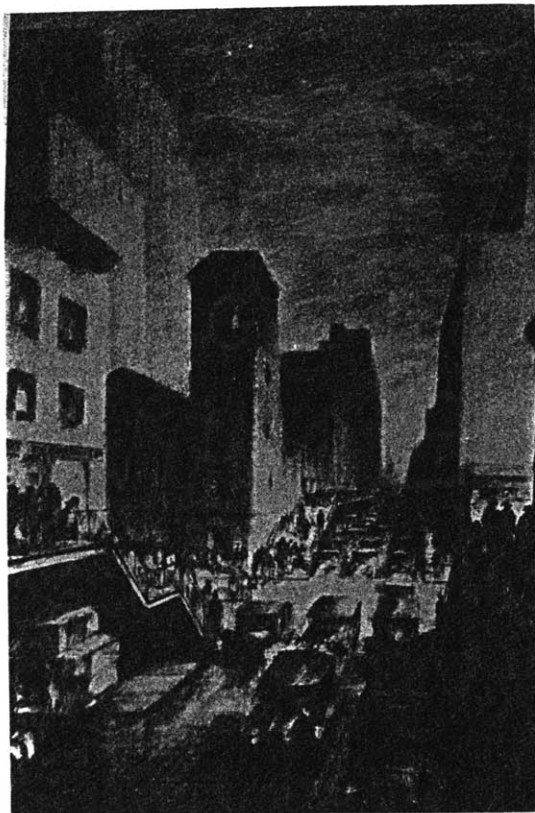
Elevated Sidewalks Provide Wider Roadways

Raised Sidewalks and Bridges Provide Safety and
Street Space

A VIEW IN THE NEW YORK OF THE FUTURE

FROM A DRAWING BY HUGH FERRISS
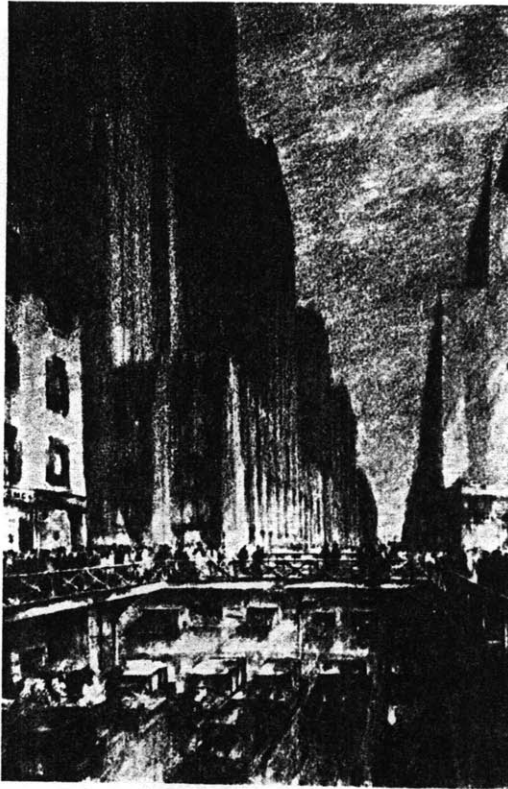
4.57
"Raised Sidewalks and Bridges
Provide Safety and Street Space"
(Harvey Wiley Corbett, "The
Problem of Traffic Congestion and a
Solution," AF 46 (March 1927): pp.
200-8).
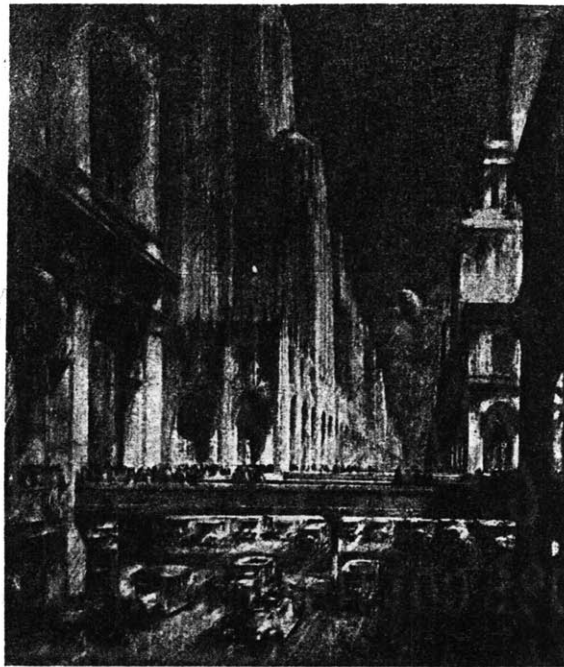
4.58
"A View of the New York of the
Future" (Harvey Wiley Corbett,
"The Problem of Traffic Congestion
and a Solution," AF 46 (March
1927): pp. 200-8).
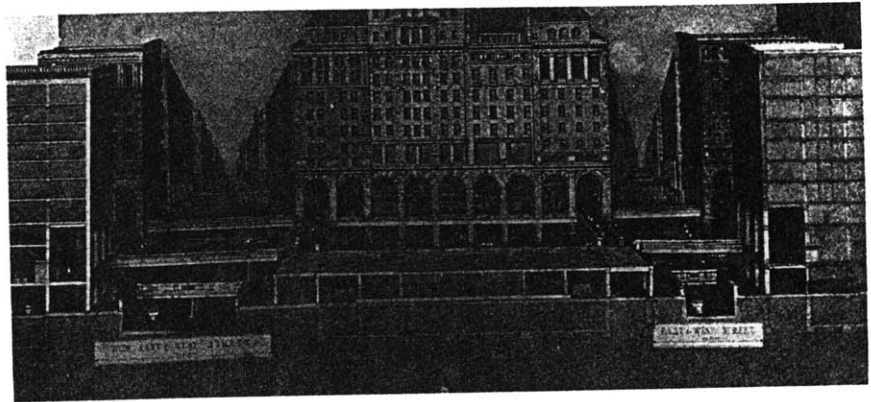
4.59

Model photos showing the arcade system illustrated in Thomas Adams, <u>The Building of the City</u> (New York, 1931), p. 313.

4.60

Drawing of arcades in Karlsruhe in Werner Hegemann and Elbert Peets, <u>American Vitruvius: An Architect's Handbook fo Civic Art</u> (New York, 1922), fig. 820.
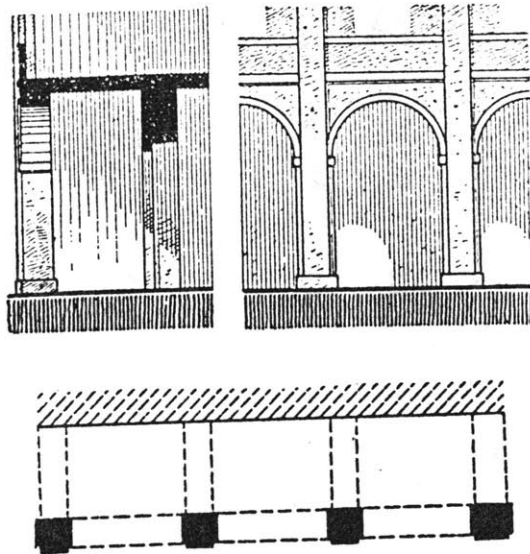
Karlsruhe, Laubengänge am Schloßplatz.
(Maßstab 1 : 200.)

FIG. 820—CARLSRUHE.   ARCADED
WALK ON THE SCHLOSSPLATZ

ARCHITECTURAL STREET DESIGN
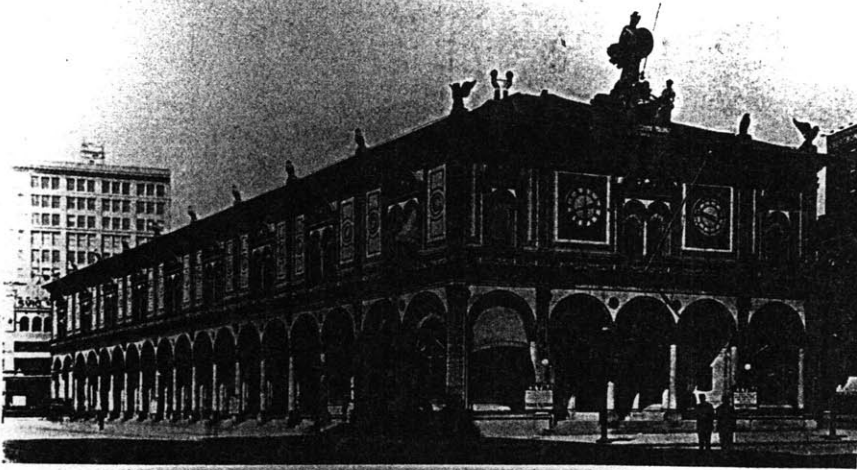
FIG. 831—NEW YORK. HERALD BUILDING

The design follows closely the Palazzo del Consiglio in Verona. (From the Monograph of the work of McKim, Mead, and

4.61
Herald Tribune Building with arcades, New York City, McKim, Mead and White, as illustrated in Werner Hegemann and Elbert Peets, American Vitruvius: An Architect's Handbook fo Civic Art (New York, 1922), fig. 831.

4.62
View out of colonnade at base of Municipal Building, New York City, McKim, Mead and White, as illustrated in Werner Hegemann and Elbert Peets, American Vitruvius: An Architect's Handbook fo Civic Art (New York, 1922), fig. 617.

4.63a
View of arcade in courtyard of
apartment building in New York
City as illustrated in Werner
Hegemann and Elbert Peets,
<u>American Vitruvius: An Architect's
Handbook fo Civic Art</u> (New York,
1922), fig. 832.

4.63b
Arcade in courtyard of apartment
building, plan Warren and Wetmore,
as illustrated in Werner Hegemann
and Elbert Peets, <u>American
Vitruvius: An Architect's Handbook
fo Civic Art</u> (New York, 1922), fig.
833.
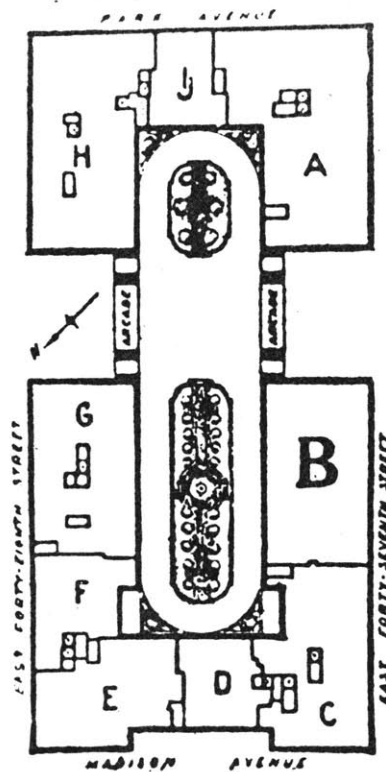
AMERICAN CITIES WERE PLANNED FOR THREE AND FOUR
STORY BUILDINGS SO THAT EVEN ON COMPARATIVELY
NARROW STREETS THE BUILDING WALL WAS NOT AS
HIGH AS THE STREET IS WIDE. THE MASS OF MOST
BUILDINGS AND CERTAINLY THE MASS OF A BLOCK
OF BUILDINGS WAS HORIZONTAL. MASONRY CONSTRUC-
TION WAS THE BUILDING METHOD. HORIZONTAL COM-
POSITIONS WERE THE NATURAL RESULT. SUCH STREETS
ARE STILL SEEN IN PARTS OF NEW YORK AND CER-
TAINLY IN ALL CITIES OF EUROPE AND THERE IS A
HARMONY OF ASPECT DUE LARGELY TO THE BROAD
STRETCH OF SKY VISIBLE FROM THE STREET

4.64

First Stage of proposal by Harvey
Wiley Corbett for visual devices with
which to tie street wall of highrise
city together illustrated in Corbett,
"The Birth and Development of the
Tall Building," AA 129 (January 5,
1926): pp. 37-40.

4.65

Second Stage (Harvey Wiley
Corbett, "The Birth and
Development of the Tall Building,"
AA 129 (January 5, 1926): pp. 37-40).
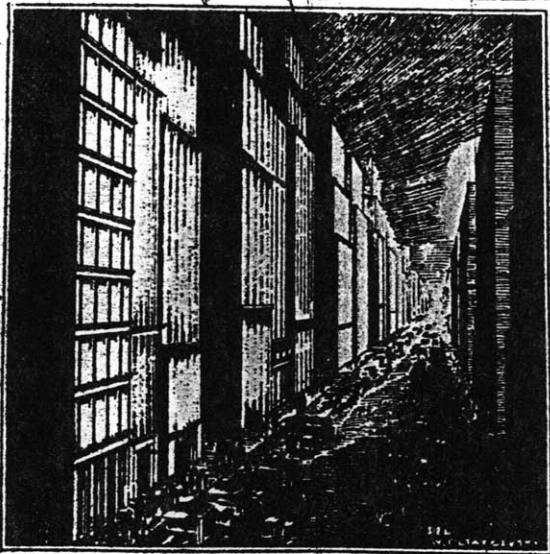
WHEN BUILDINGS BEGAN TO PILE UP HIGHER THAN
THE WIDTH OF THE STREET. THEY STILL CARRIED THE
IDEA OF THE HORIZONTAL LINE OF MASONRY CON-
STRUCTION. BUT THEIR MASS HAD CHANGED FROM HORI-
ZONTAL TO VERTICAL AND THEIR CONSTRUCTION HAD
CHANGED FROM MASONRY TO STEEL. THE STREET
BECAME A CANYON BECAUSE ITS WALLS WERE HIGHER
THAN THE STREET WAS WIDE. THE VISIBLE SKY BE-
CAME A STRIP.—HORIZONTAL LINES CUT THE BUILDINGS
INTO PILED UP BOXES AND ALL HARMONY WAS LOST

THE FUTURE CITY MAY BE BROUGHT BACK TO A SPIRIT
OF HARMONY BY DOING THE OBVIOUS THING. THAT CAN
BE ACCOMPLISHED BY PLACING THE VERTICAL COMPOSI-
TION ON THE VERTICAL MASS. TO BE SURE THE STREET
IS STILL A CANYON, BUT THE VERTICAL LINES OF THE
BUILDING WILL CARRY THE EYE UNCONSCIOUSLY TO
THE STRIP OF THE SKY ABOVE, HOWEVER NARROW THE
CANYON MAY BE, AND THE HARMONY OF THE STREET
RE-ESTABLISHED BY THE HARMONY IN COMPOSITION
OF THE INDIVIDUAL ELEMENTS WHICH COMPOSE IT

4.66

Third Stage (Harvey Wiley Corbett,
"The Birth and Development of the
Tall Building," AA 129 (January 5,
1926): pp. 37-40).

4.67

Perspective of arcade at base of
Barclay Vesey Building illustrated in
Harvey Wiley Corbett, "Different
Levels for Foot, Wheel and Rail,"
American City Magazine 31 (July,
1924): pp. 2-7.
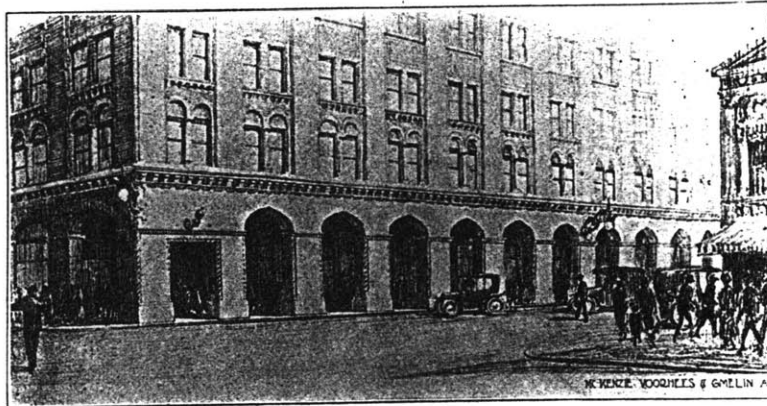
ARCADED SIDEWALK OF BUILDING NOW UNDER CONSTRUCTION ON VESEY STREET, NEW YORK

Prior to the approval of the type of building above shown, the Board of Estimate and Apportionment had been
considering the widening of Vesey Street between Washington and West Streets, by acquiring a strip of property
on the northerly side of the street. It was subsequently decided, however, to accept the proposition made by
the New York Telephone Realty Corporation that if the city would consent to abandon the proposed change in the
street width, the Corporation would consent to the construction of an arcade within the building line with a side-
walk width of 17 feet and a height of at least 18 feet, the effect of which would be to permit of widening the
roadway from 30 feet to approximately 44 feet through the inclusion within its lines of the sidewalk now in use
on the northerly side of the street. A detailed report on this subject, with much valuable information regard-
ing arcaded sidewalks in American and European cities, is obtainable from Arthur S. Tuttle, Chief Engineer of
the Board of Estimate and Apportionment, City of New York
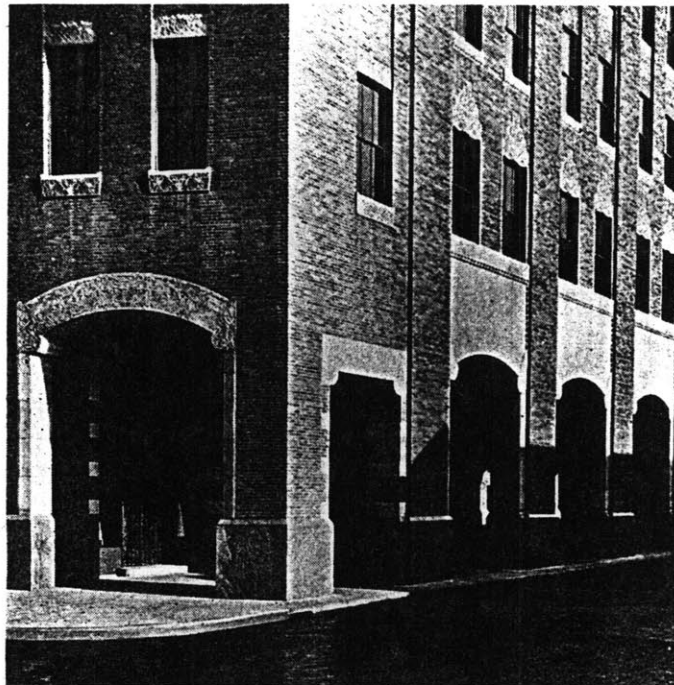
4.68
Photo of arcade at base of Barclay
Vesey Building taken by Arthur
Tuttle illustrated in Thomas Adams,
The Building of the City (New York,
1931), p. 291.
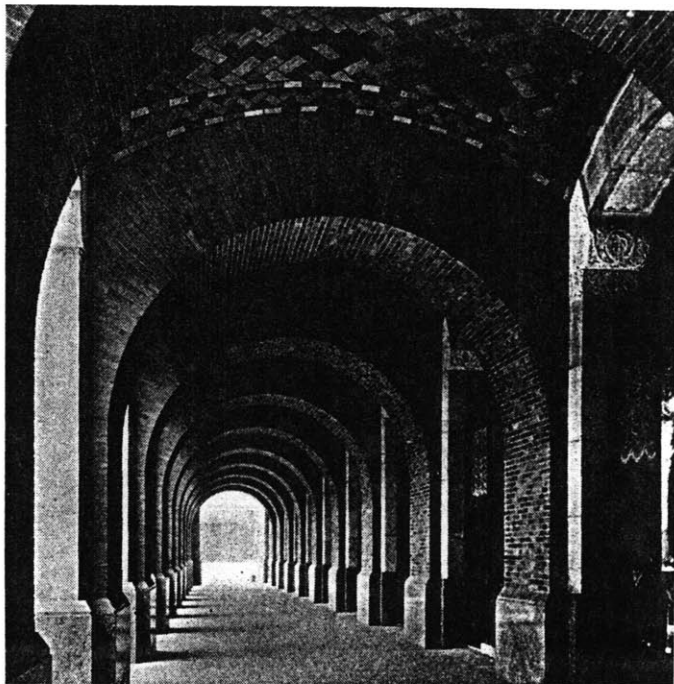
4.69
View in Arcade (Thomas Adams,
The Building of the City (New York,
1931), p. 309).
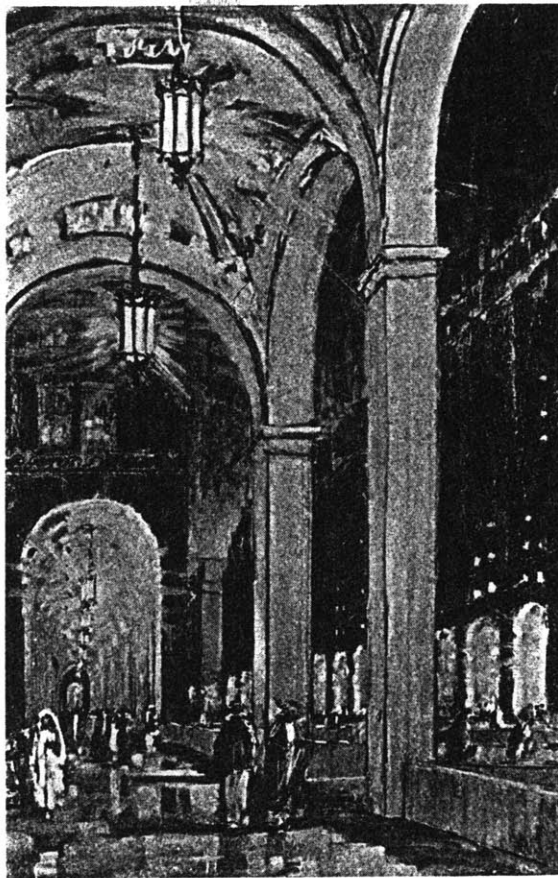
4.70

"View showing possibilities of Arcades" from Thomas Adams, The Building of the City (New York, 1931), p. 309.

4.71

Diagrammatic layout of proposed road system around New York City from the Regional Plan for New York and Its Environs (Committee on the Regional Plan of New York and Its Environs, The Graphic Regional Plan (New York, 1929), p. 179).

WAYS OF COMMUNICATION

DIAGRAMMATIC SCHEME
FOR
REGIONAL HIGHWAY ROUTES

LEGEND
Metropolitan Loop ————
Other Routes ————
Metropolitan By-Pass •••••

MAY 1928
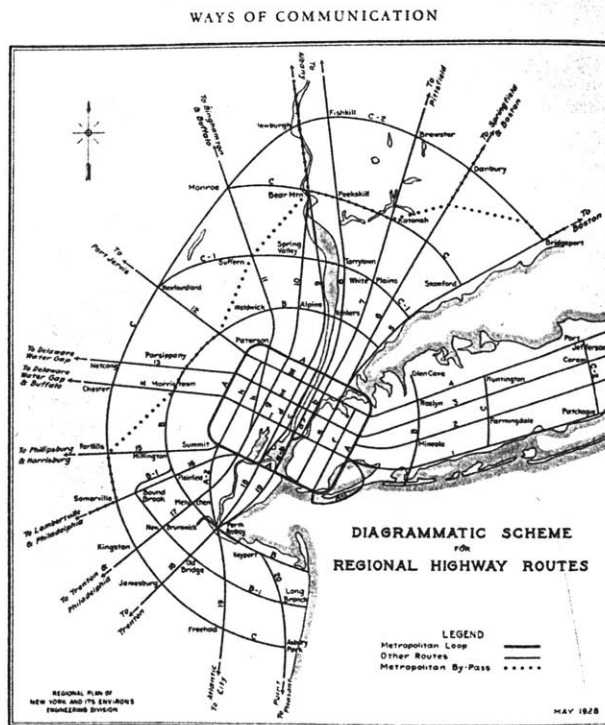
FIG. 11

ally supplementary and parallel to proposed general traffic routes shown in Fig. 12. On Pocket Map No. 2 and in the detailed description these have been designated as routes 6-B, 10-B, etc.[1]

[1] The relation of boulevards and parkways to the highway system is discussed in more detail in a later section of this chapter, which also includes a brief summary of all proposals for such routes. (See pages 269-285.)

[218]

529

KEY PLAN
FOR
REGIONAL HIGHWAY ROUTES

SCALE OF MILES

LEGEND
Metropolitan Loop
Other Routes
Metropolitan By-Pass

MAY 1928

FIG. 12

Both the boulevards and parkways may be considered as parts of the park system and are therefore included in Pocket Map No. 4, which shows the park and parkway system.
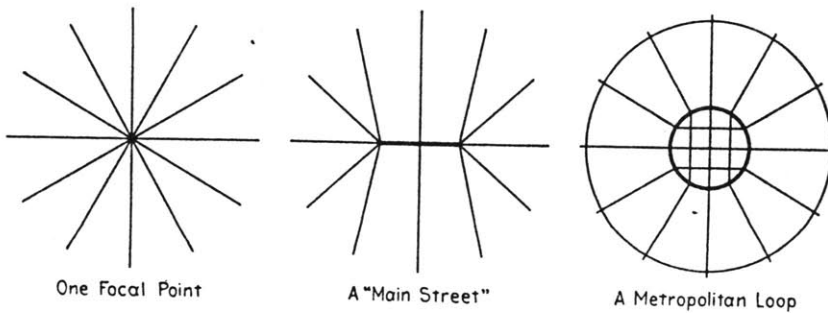
One Focal Point   A "Main Street"   A Metropolitan Loop

FIG. 8
DIAGRAMMATIC PRESENTATION OF VARIOUS TYPES OF HIGHWAY SYSTEMS

4.72

"Key Plan, Regional Highway System," map showing locations of road network as extended around New York City to complete the metropolitan loop system from the Regional Plan for New York and Its Environs (Committee on the Regional Plan of New York and Its Environs, The Graphic Regional Plan (New York, 1929), p. 219).

4.73

Diagram showing principle of "metropolitan loop" from Committee on the Regional Plan of New York and Its Environs, The Graphic Regional Plan (New York, 1929), p. 218.

MUNICIPALLY ZONED INDUSTRIAL AREAS
OF THE
CENTRAL PART OF THE NEW YORK REGION
1928

FIG. 24

[325]

LAND USES

REGIONALLY ZONED INDUSTRIAL AREAS
OF THE
CENTRAL PART OF THE NEW YORK REGION
1928

FIG. 23

[324]
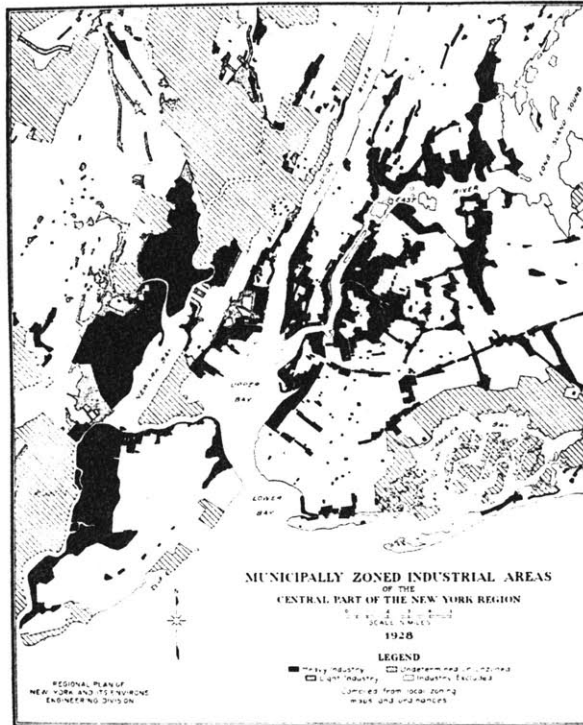
4.74

Map indicating locations of industry in the metropolitan area illustrated in the Regional Plan for New York (Committee on the Regional Plan of New York and Its Environs, The Graphic Regional Plan (New York, 1929), p. 325).

4.75

Diagram showing intended zoning "recentralization" of industry in the metropolitan area from the Regional Plan for New York (Committee on the Regional Plan of New York and Its Environs, The Graphic Regional Plan (New York, 1929), p. 325).

4.76
Plan showing proposed Staten Island Ferry Terminal and Office Building from Thomas Adams, The Building of the City (New York, 1931), pp. 518-19.
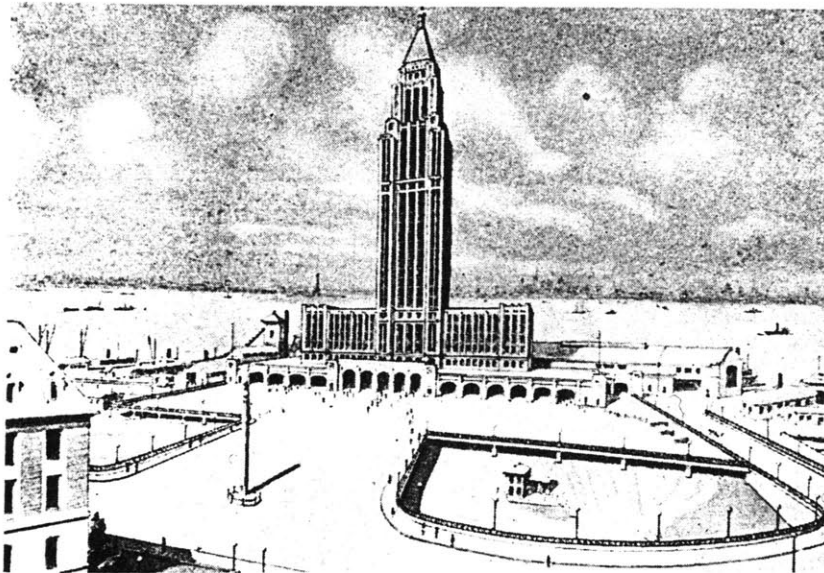
4.77
Perspective of proposed Staten Island Ferry Terminal and Office Building from Thomas Adams, The Building of the City (New York, 1931), pp. 518-19.

4.78
Causeway proposal by William
Wilgus from Thomas Adams, The
Building of the City (New York,
1931), p. 235.

4.79
Tower proposed for causeway
project by William Wilgus from
Thomas Adams, The Building of the
City (New York, 1931), p. 234.
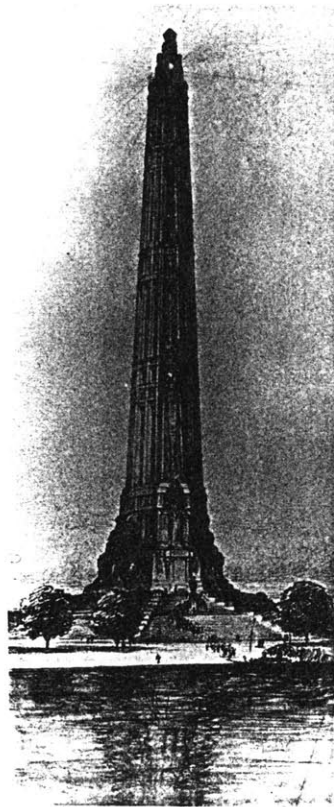
CONCEPTION FOR THE LIGHTHOUSES AT THE HARBOR
ENTRANCE
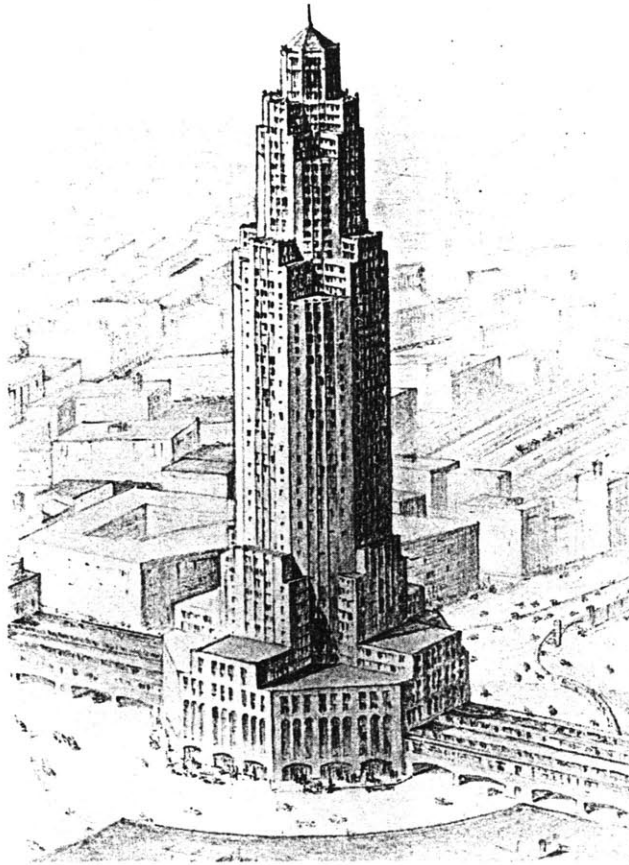
4.80

Proposal for highrise at Sunnyside Yard, Long Island City, by Arthur Holden from Thomas Adams, The Building of the City (New York, 1931), pp. 501-3.

4.81

Proposal for highrise at Sunnyside Yard, from Thomas Adams, The Building of the City (New York, 1931), pp. 501-3.

534
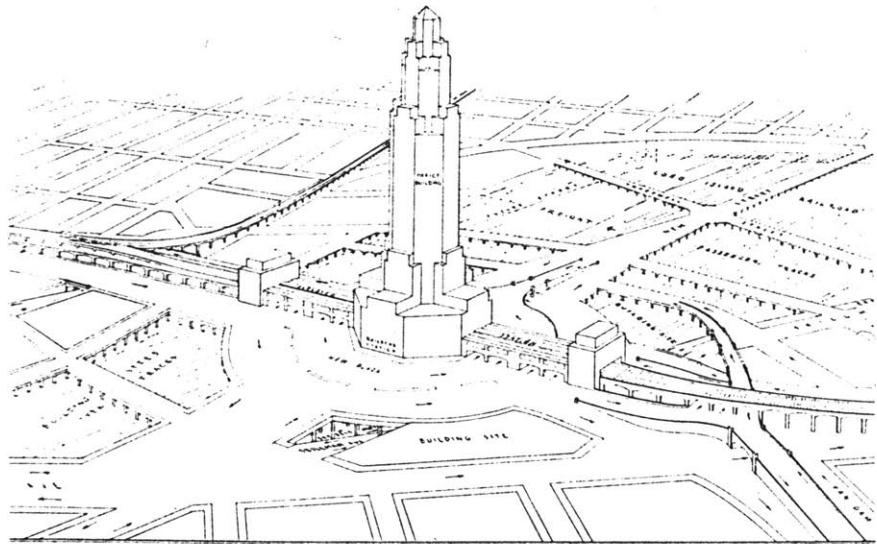
4.82
Proposal for highrise at Sunnyside
Yard showing tower above
circulation network, from Thomas
Adams, The Building of the City
(New York, 1931), pp. 501-3.

4.83
Proposed zoning envelope for
buildings at business centers in open
suburban areas from Thomas
Adams, The Building of the City
(New York, 1931), p. 175.

Sub-central areas (New York and the largest of the surround-   Central areas (New York City)

Dietel & Wade and Sullivan W. Jones, Archi
MODEL OF THE NEW CITY HALL OF BUFFALO
A symbol of civic spirit now erected.
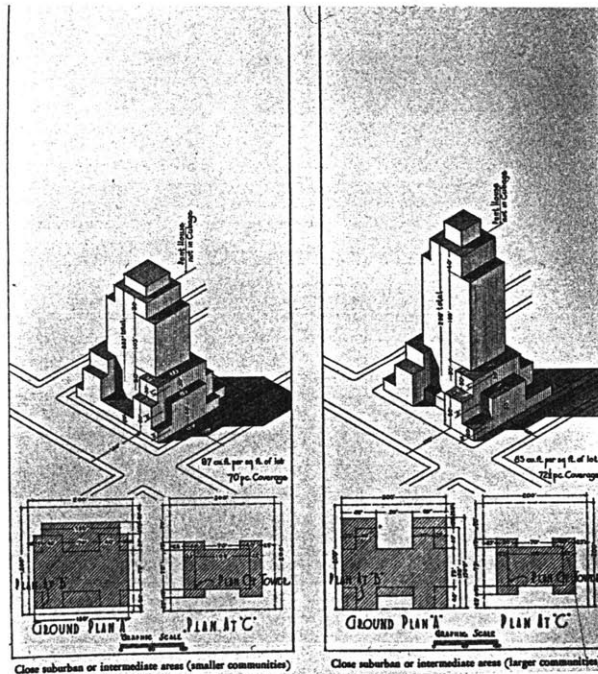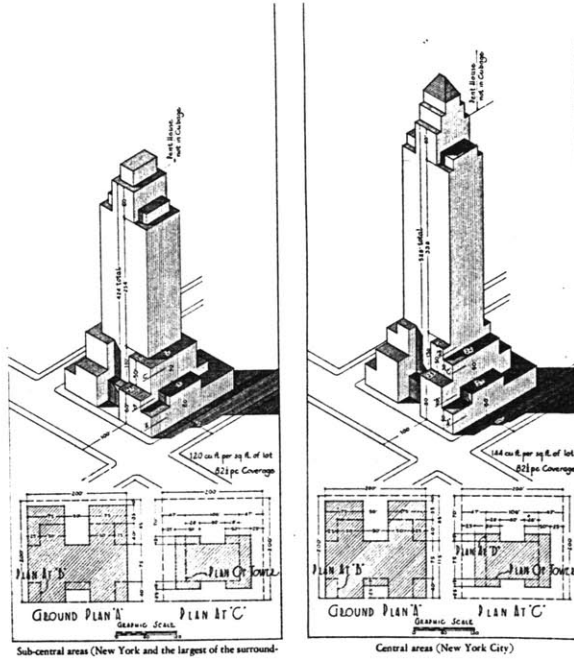
4.84
Proposed zoning envelope for buildings at business centers in subcentral areas and central areas from Thomas Adams, The Building of the City (New York, 1931), p. 175.

4.85
"A symbol of civic spirit was erected," City Hall at Buffalo, Dietel & Wade with Sullivan Jones, ca. 1927 from Thomas Adams, The Building of the City (New York, 1931), p. 127.
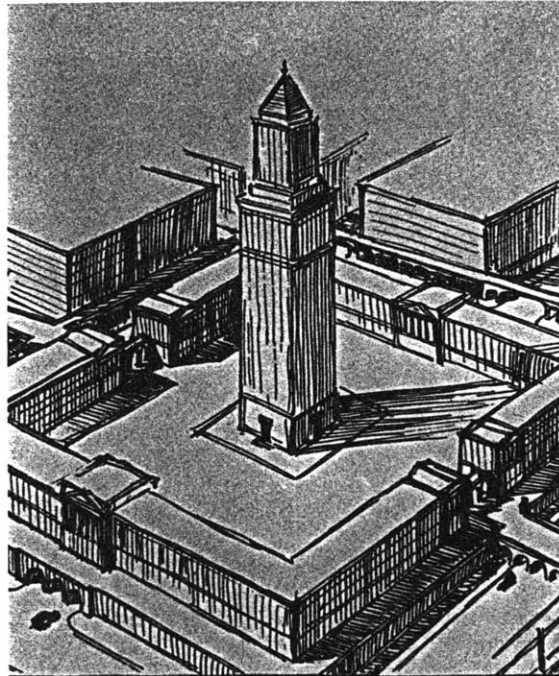
FIG. 625—CIVIC CENTER GROUP

View going with plan Fig. 624.

4.86
Proposal for a Civic Center Group
with parking garage below from
Werner Hegemann and Elbert Peets,
American Vitruvius: An Architect's
Handbook fo Civic Art (New York,
1922), fig. 625.

4.87
Civic Group, Springfield, MA, Pell
and Corbett, 1908-13, from Werner
Hegemann and Elbert Peets,
American Vitruvius: An Architect's
Handbook fo Civic Art (New York,
1922), fig. 593.

igned by Corbett, Harrison and MacMurray, Architects *Rendering by Hugh*
THE NEW ARCHITECTURE
A proposed art center for Manhattan.
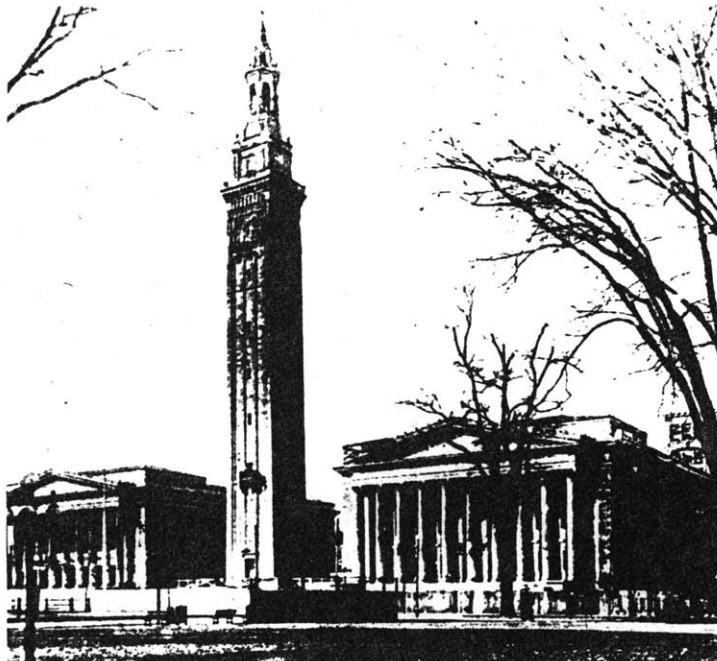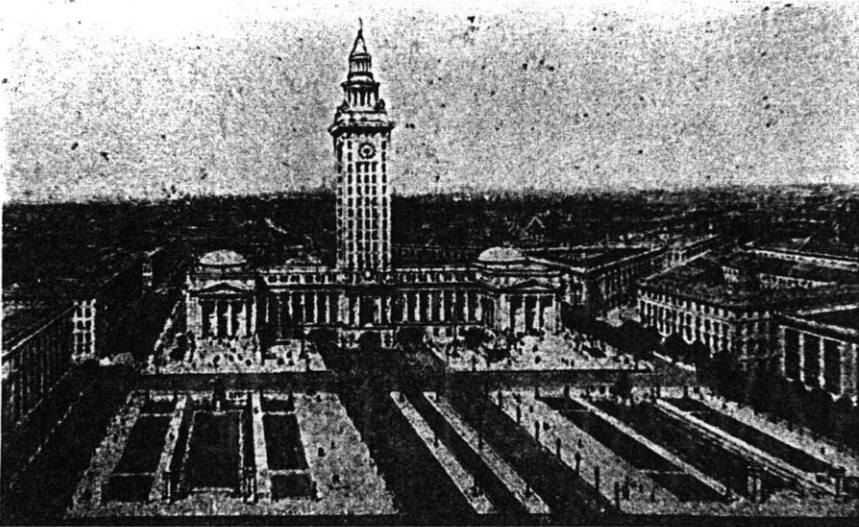
4.88
Proposed Civic Group, Rochester, NY, Brunner, Olmsted and Arnold from Werner Hegemann and Elbert Peets, American Vitruvius: An Architect's Handbook fo Civic Art (New York, 1922), fig. 595.

4.89
Proposal for Rockefeller Center, New York City, Raymond Hood et al., from Thomas Adams, The Building of the City (New York, 1931), p. 112.
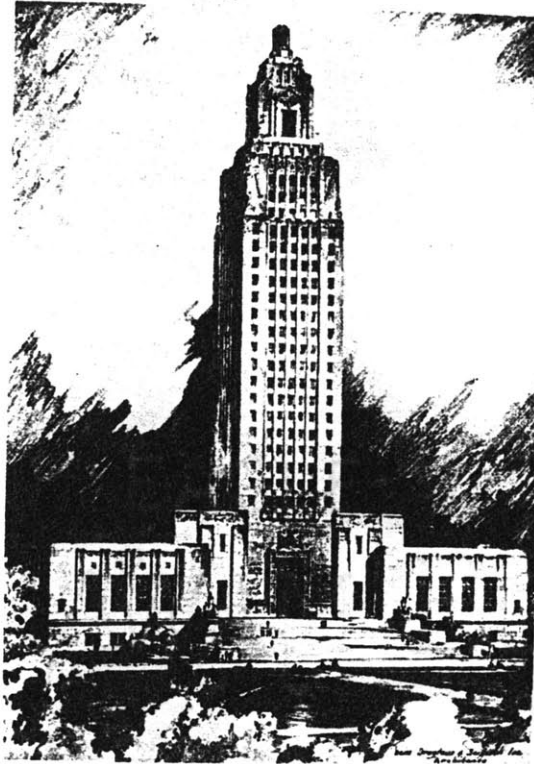
Weiss, Dreyfous and Seiferth, Inc., Architects

THE NEW LOUISIANA STATE CAPITOL, BATON ROUGE

An excellent example of a building well within the requirements
proposed for sub-central areas.

4.90

"An excellent example of a building
well within the requirements
proposed for subcentral areas,"
drawing of Louisiana State Capital
Building, Baton Rouge, Weiss,
Dreyfous and Seifurth, ca. 1927,
from Thomas Adams, The Building
of the City (New York, 1931), p. 179.

4.91

"A Plan for the Concentration of
New York's Municipal Government,"
proposal for a Civic Center for New
York City, Francis Swales, ca. 1929
from NYT, 12 January 1930, 7:5
(also illustrated in Thomas Adams,
The Building of the City (New York,
1931), p. 384).
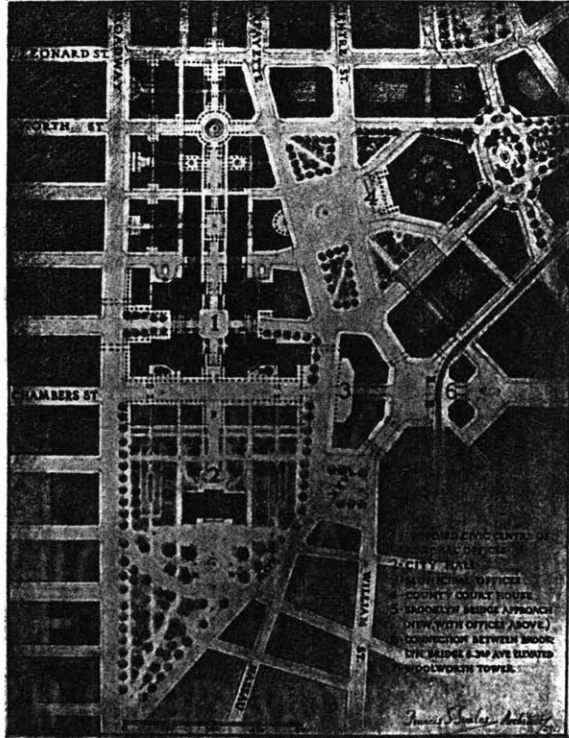
FIG. 62

PLAN OF DEVELOPMENT FOR THE MANHATTAN CIVIC CENTER
(For illustrations, see pages 384-387.)

[355]
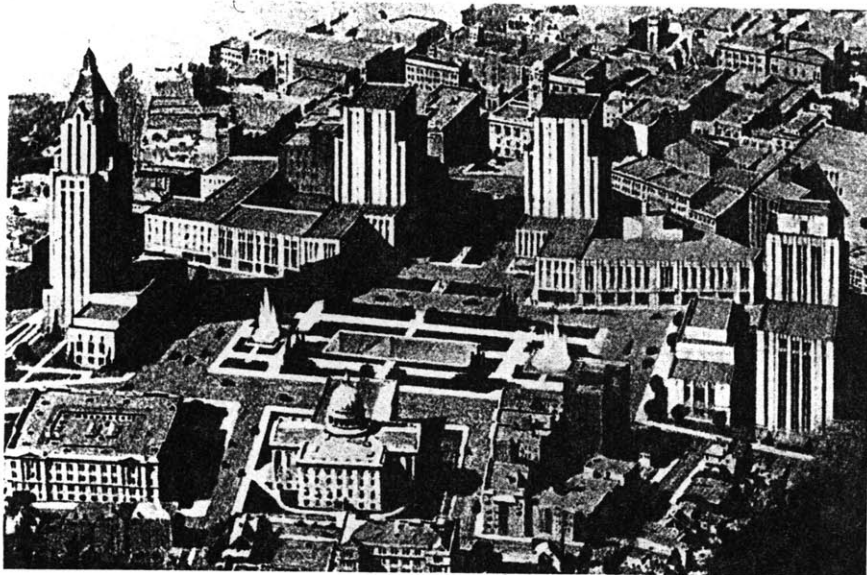
4.92
Proposal for a Civic Center for New York City, plan (Thomas Adams, The Building of the City (New York, 1931), p. 355).

4.93
Proposal for a Civic Center, Patterson, NJ, George Ford, ca 1929, from Thomas Adams, The Building of the City (New York, 1931), p. 548.

4.94
View of site for a Civic Center,
Patterson, NJ, from Thomas Adams,
The Building of the City (New York,
1931), p. 548.

4.95
View of Barclay Vesey Building
from Thomas Adams, The Building
of the City (New York, 1931), p. 75.

FALL RIVER LINE
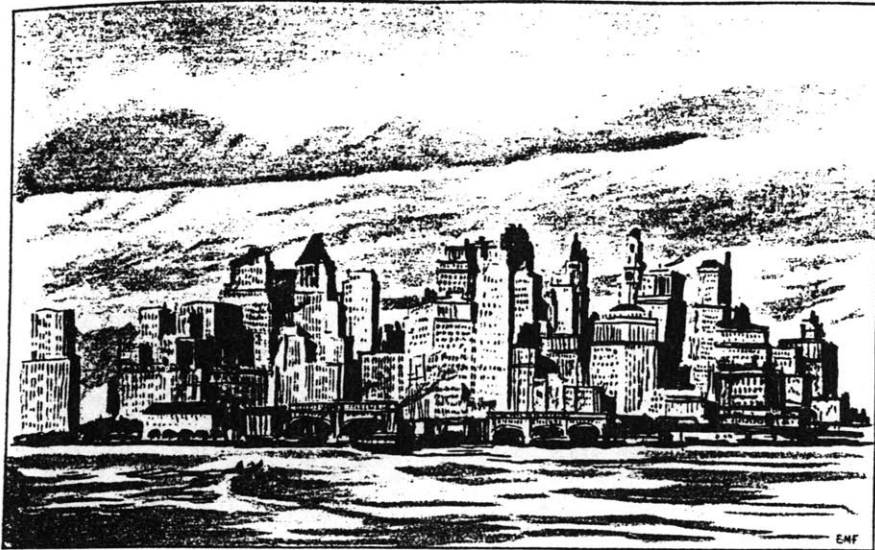
4.96
The Contemporary American City,
E. Maxwell Fry, from Thomas
Adams, The Building of the City
(New York, 1931), p. 110.
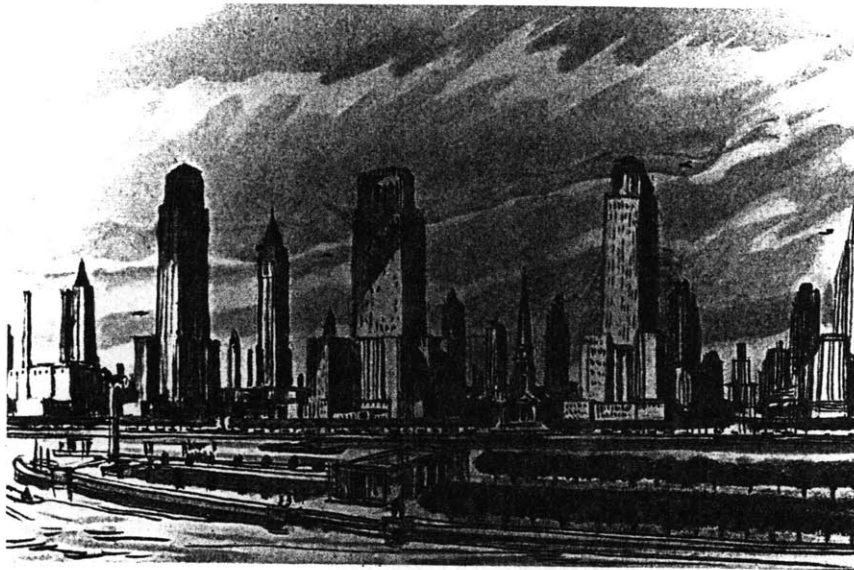
4.97
"The Future City of Towers," E.
Maxwell Fry, from Thomas Adams,
The Building of the City (New York,
1931), p. 110.

4.98
View of Manhattan skyline showing
Daily News Building and Chrysler
Building under construction (George
Hirschfeld, "To Modernize or to
Build," AF 53 (August 1930): p. 261).

4.99
"In Splendid Isolation," view of the
Empire State Building from Thomas
Adams, The Building of the City
(New York, 1931), p. 186.

Photo by William Fra

IN SPLENDID ISOLATION

4.100
Proposal for a Civic Center Tower at City Hall Park, New York, NY, by Thomas Adams with Francis Swales, ca. 1930, from Thomas Adams, The Building of the City (New York, 1931), p. 387.
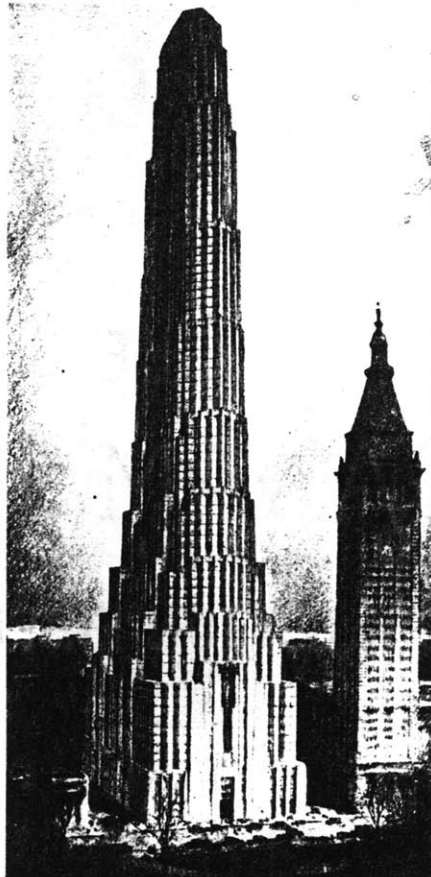
4.101
Proposed Metropolitan Life Tower, New York, NY, Harvey Wiley Corbett with D. Everett Waid, ca. 1929 (AF 52 (June 1930): p. 789).
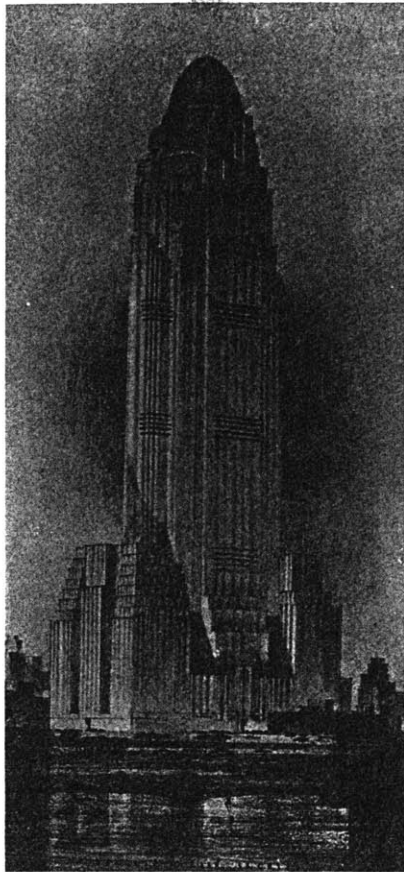
4.102
Tower Project, Ely Jacques Kahn, ca.
1929 (<u>AF</u> 52 (June 1930): p. 805).

4.103
Project for a "City of Towers,"
Raymond Hood, ca. 1926 (Frederick
Delano, "Skyscraper," <u>American City</u>
<u>Magazine</u> 34 (January 1926)).
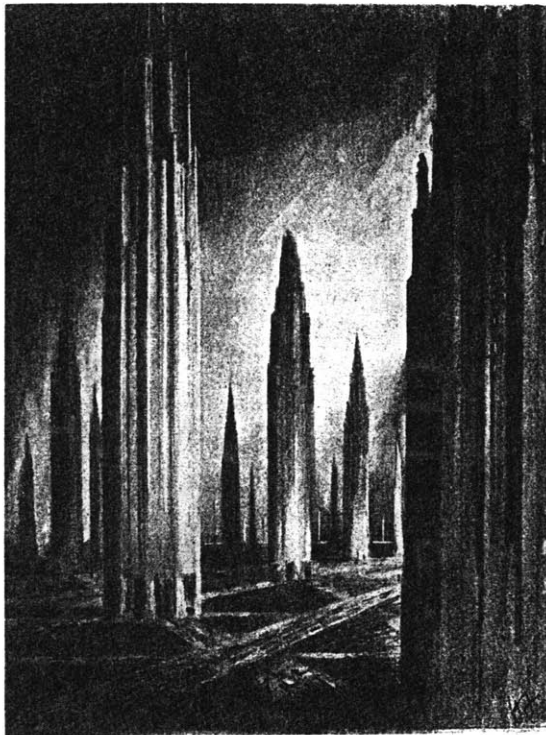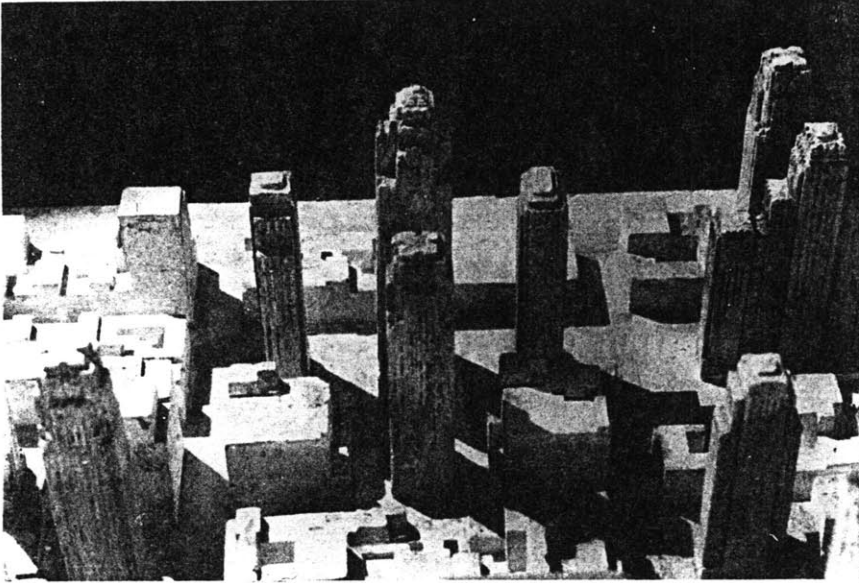
GROUP OF BUILDINGS—*OWNED, LEASED OR OCCUPIED IN PART BY*
THE NEW YORK TELEPHONE COMPANY
Copyrighted N. Y. Tel. Co.

The New York Telephone Co. *owns* 212 buildings in New York and *leases* 340

4.104
Project for a "City of Towers,"
Raymond Hood, ca. 1929 (Walter
Kilham, Raymond Hood, Architect:
Form Through Function in the
American Skyscraper (New York,
1973), p. 90).

4.105
"Telephone City," from W. Parker
Chase, New York 1932: The Wonder
City (New York, 1932), p. 194.

546

4.106
Western Union Telegraph, 60
Hudson Street, New York City,
Voorhees, Gmelin and Walker, 1928-
29 (AF 52 (1930) p. 807).

4.107
New York Telephone Company, 140
West Street, New York, NY,
Voorhees, Gmelin and Walker, ca.
1928 (W. Parker Chase, New York
1932: The Wonder City (New York,
1932), p. 194).
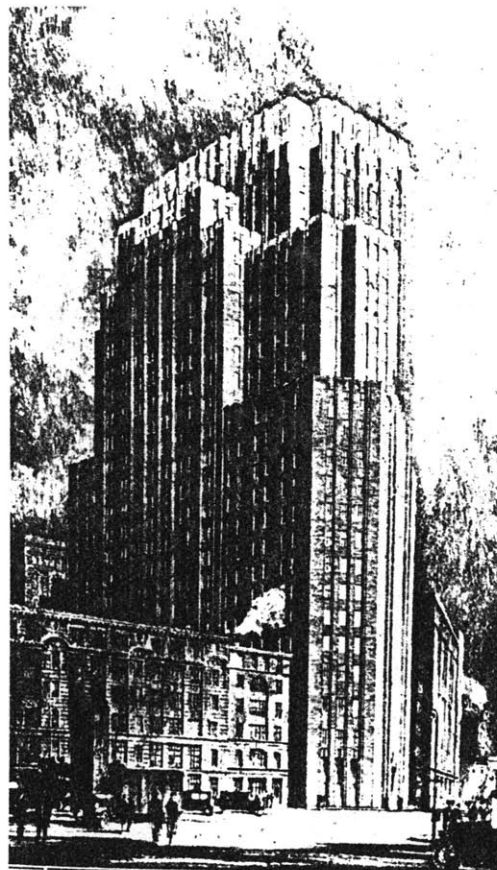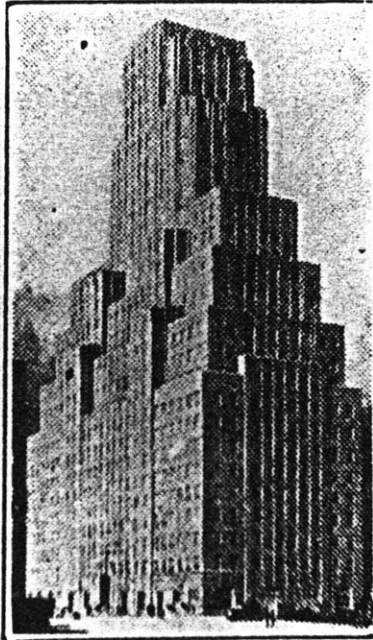
NEW YORK TELEPHONE CO.
Long Island Headquarters
101 Willoughby St. Cor.
Bridge St., Brooklyn.

4.108
New York Telephone Company, 101 Willoughby Street, Brooklyn, NY, Voorhees, Gmelin and Walker, ca. 1928 (W. Parker Chase, New York 1932: The Wonder City (New York, 1932), p. 194).
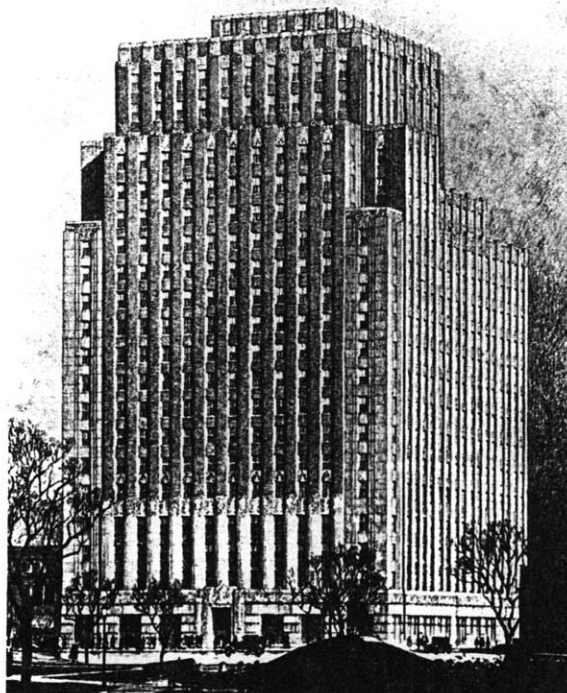
4.109
New Jersey Telephone Building, Newark, NJ, Voorhees, Gmelin and Walker, ca. 1927 (AF 52 (1930): pp. 667-87).
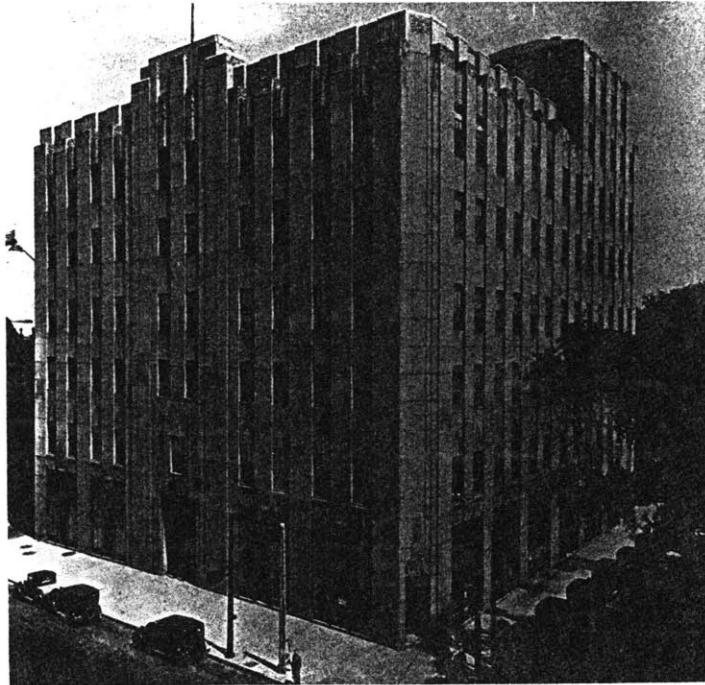
4.110
New York Telephone Building,
Syracuse, NY, Voorhees, Gmelin
and Walker, ca. 1928 (AF 48
(January 1928): pp. 1-4).

4.111
New York Telephone Building,
Hempstead, NY, Voorhees, Gmelin
and Walker, ca. 1928 (by author).

4.112
Elverson Building, Philadelphia, PA,
Rankin, Kellogg and Crane, 1925,
from George Edgell, American
Architecture of Today (New York,
1928).

4.113
Aerial view, New York City from
George Edgell, American
Architecture of Today (New York,
1928), p. 355.
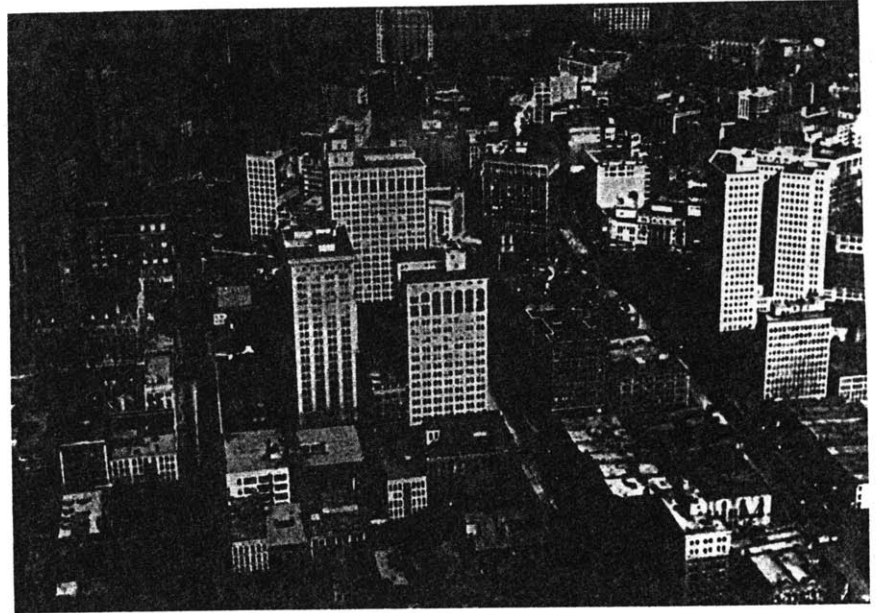
4.114
Aerial view, Detroit from George
Edgell, American Architecture of
Today (New York, 1928), p. 356.
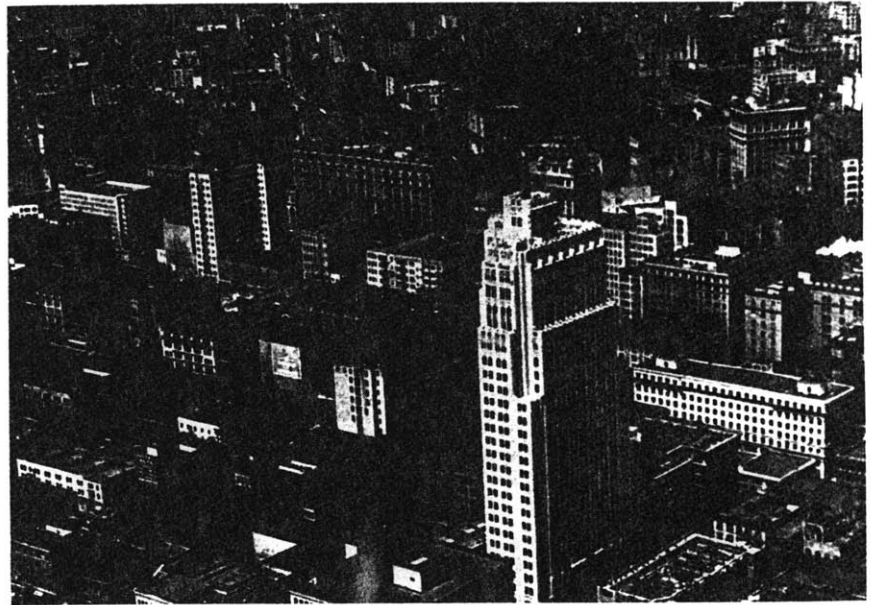
4.115
Aerial view, San Francisco from
George Edgell, American
Architecture of Today (New York,
1928), p. 357.
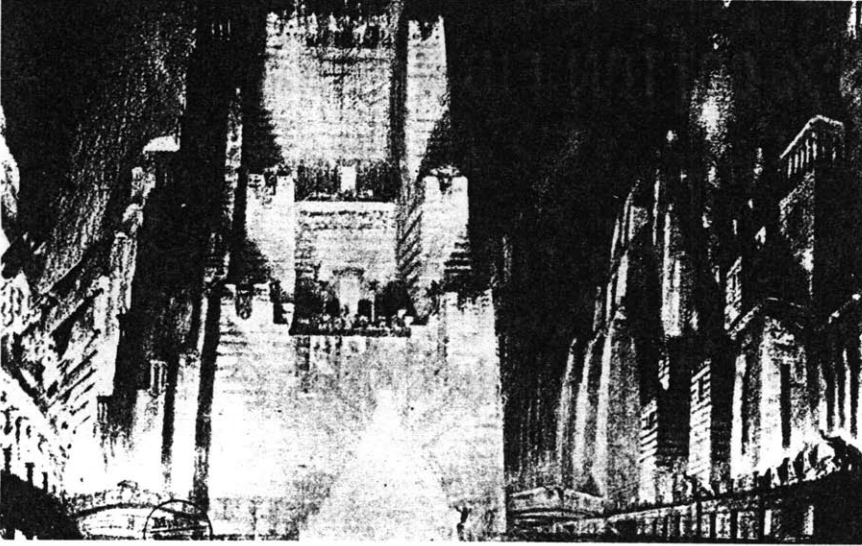
4.116
Hugh Ferriss drawing from George
Edgell, <u>American Architecture of
Today</u> (New York, 1928), p. 374
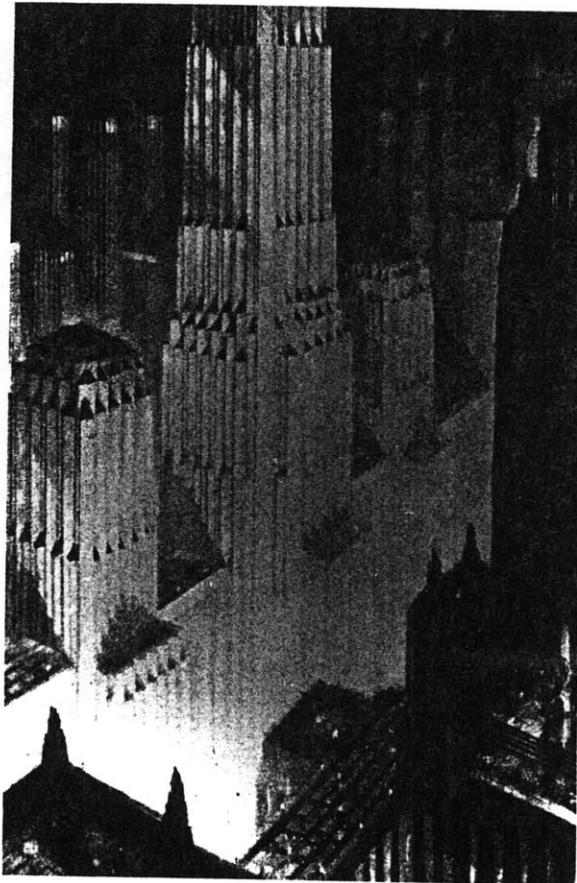
4.117
"An Imaginary City" by Hugh Ferriss
reproduced from <u>Vanity Fair</u> in
Sheldon Cheney, <u>The New World
Architecture</u> (New York, 1930), p.
153.
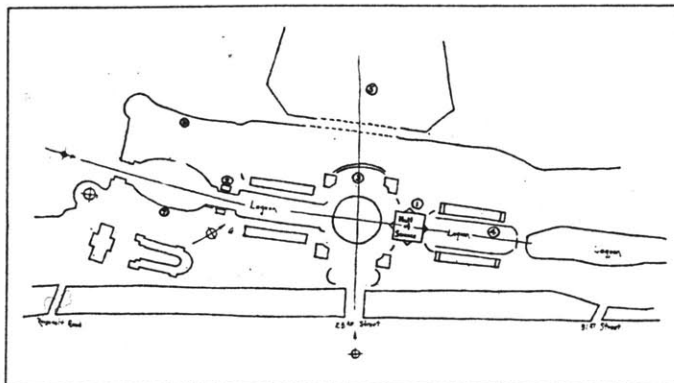
"THE ACCEPTED PARTI"

Combining the more important elements of the several schemes shown hereafter. 1. The Hall of Science, to dominate the composition; 2. The Water Portal; 3. The 23rd Street axis; 4. The south lagoon; 5. The proposed airport; 6. Site of Horticultural Building; 7. Site of Festival Hall.

4.118

"The Accepted Parti," Century of Progress International Exposition, Chicago, 1929 ("Preliminary Studies for the Chicago World's Fair," PP 10 (February 1929): pp.216-18).

4.119

Preliminary Study for the Chicago World's Fair, Arthur Brown, perspective ("Preliminary Studies for the Chicago World's Fair," PP 10 (February 1929): pp.216-18).
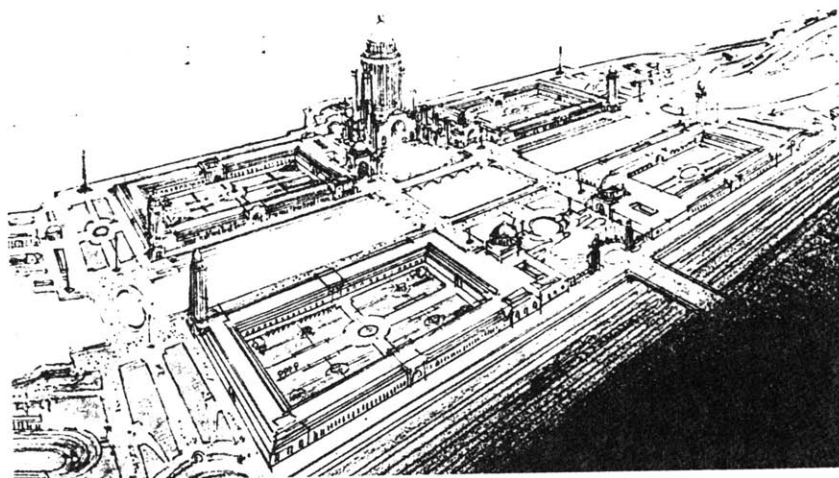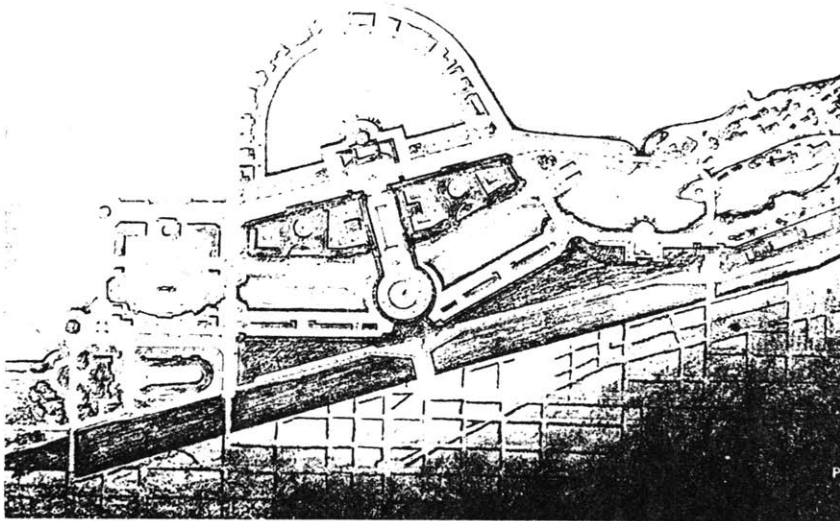
4.120
Preliminary Study for the Chicago
World's Fair, Paul Cret, plan
("Preliminary Studies for the
Chicago World's Fair," PP 10
(February 1929): pp.216-18).
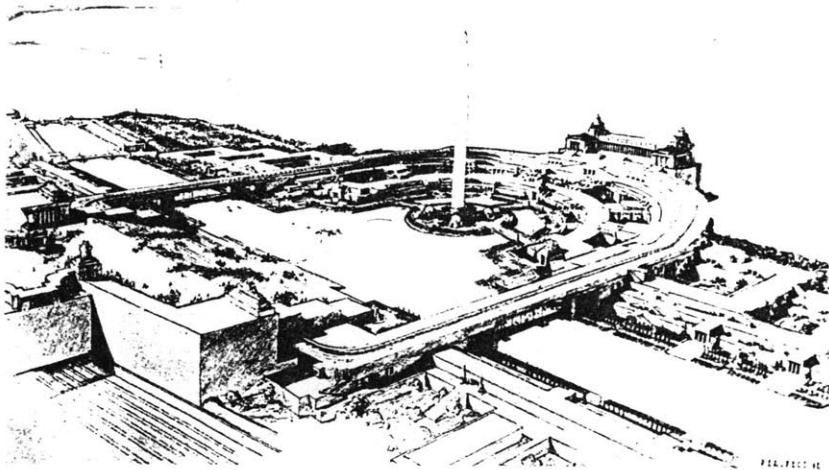
4.121
Preliminary Study for the Chicago
World's Fair, Raymond Hood,
perspective ("Preliminary Studies for
the Chicago World's Fair," PP 10
(February 1929): pp.216-18).
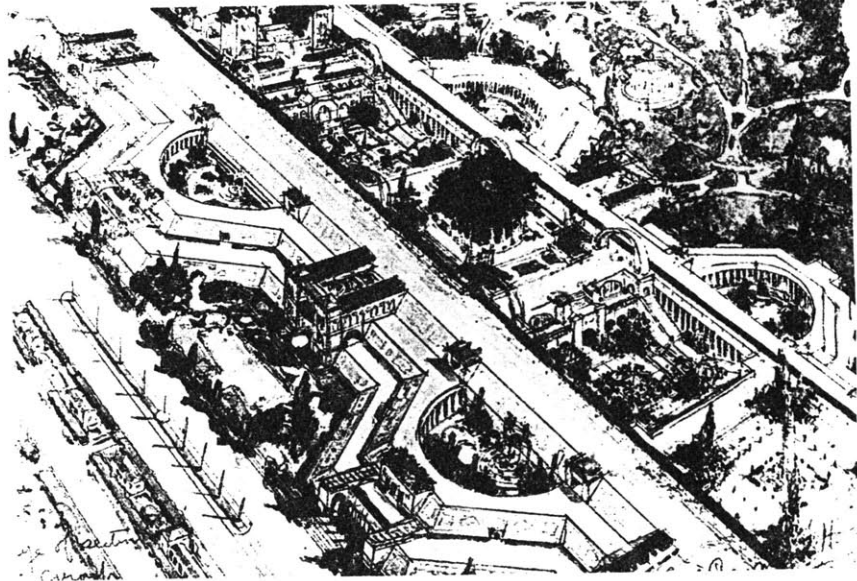
4.122
Preliminary Study for the Chicago
World's Fair, Raymond Hood,
perspective ("Preliminary Studies for
the Chicago World's Fair," PP 10
(February 1929): pp.216-18).
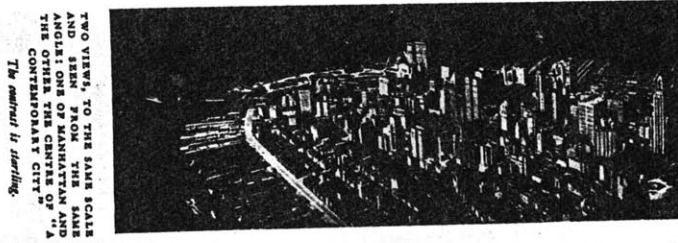
4.123
Ville Contemporaine and aerial view
of New York City from Le
Corbusier, Urbanisme (Paris 1924;
English trans., New York, 1929),
p.169.

PROPOSED EXPOSITION GROUNDS FOR CHICAGO WORLD'S FAIR CENTENNIAL CELEBRATION

SUGGESTION BY HARVEY W. CORBETT OF TERRACES AND ROOF PLAZA WITH VERTICAL ORNAMENTATION

This drawing clearly shows how the exposition will be made up of multi-storied buildings rather than being all on one level as in previous expositions. Each story will project out beyond the story above it, giving rise to a system of terraces. By this means, persons visiting the lower floors will not be shut in but will enjoy a feeling of openness on all sides. The public, upon entering the exposition, will first be conducted to the roof by means of escalators and can then circulate all about on moving sidewalks. The lower floors of any building will thus be approached from above. Canals at the water level will provide supplementary circulation.

4.124

Preliminary Study for the Chicago
World's Fair, Ralph Walker,
perspective ("Preliminary Studies for
the Chicago World's Fair," PP 10
(February 1929): pp.216-18).
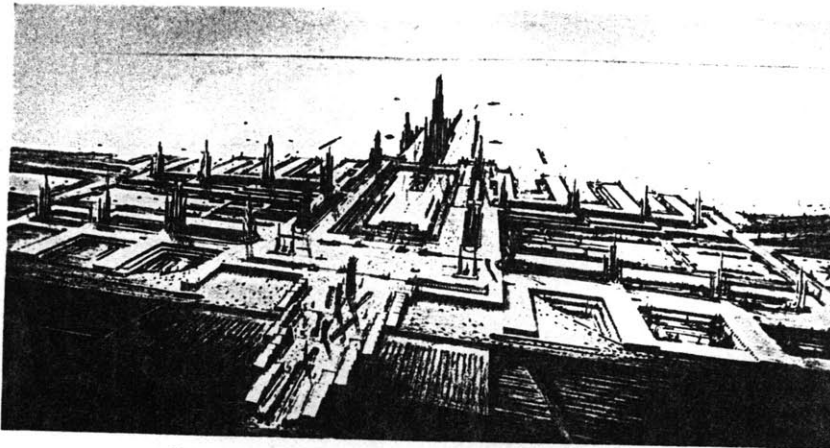
4.125

Preliminary Study for the Chicago
World's Fair, Harvey Wiley Corbett,
perspective ("Preliminary Studies for
the Chicago World's Fair," PP 10
(February 1929): pp.216-18).
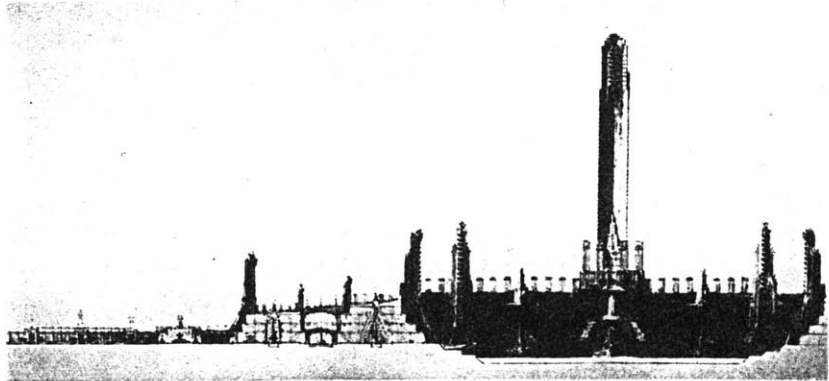
PROPOSED EXPOSITION GROUNDS FOR CHICAGO WORLD'S FAIR CENTENNIAL CELEBRATION

SECTION OF STUDY BY HARVEY WILEY CORBETT INDICATING TREATMENT OF VERTICALS AND SHOWING CANAL PASSING THROUGH MAJOR BUILDING

This drawing shows the intention to have the buildings consist of several stories. Moving sidewalks at the roof level will transport visitors to all parts of the exposition without fatiguing them while canals at the water level will provide opportunity for electrically operated passenger boats to circulate freely from building to building. **The water of the canals will be kept in circulation by many large fountains which are in evidence in the drawing.**

4.126

Preliminary Study for the Chicago World's Fair, Harvey Wiley Corbett, section ("Preliminary Studies for the Chicago World's Fair," PP 10 (February 1929): pp.216-18).

4.127

General Exhibits Pavilion, Century of Progress International Exhibition, Chicago, Harvey Wiley Corbett, 1933 (AF 59 (July 1933): p. 12).

557

COURT A

COURT B

COURT C

GREAT HALL

GREAT HALL

POOL

POOL

POOL

EXHIBITS

OPEN ABOVE

OPEN ABOVE

CONCESSIONS

BALCONY OVER

OFFICE

FIRST FLOOR PLAN

SCALE IN FEET
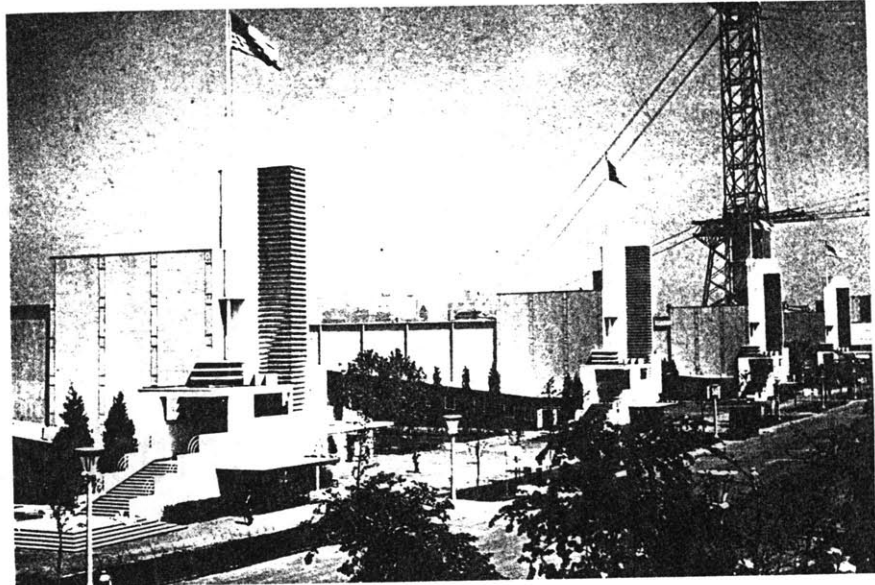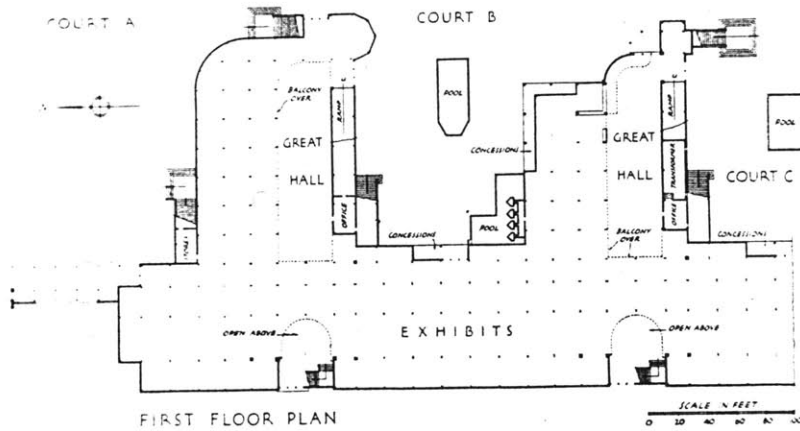
4.128

General Exhibits Pavilion, Century of Progress International Exhibition, Chicago, Harvey Wiley Corbett, 1933, plan (AF v. 59 (July 1933): p. 12).

5.1

Project for the Chicago Tribune Building, Chicago, IL, Eliel Saarinen, 1922 (The International Competition for a New Administration Building for the Chicago Tribune, 1922 (Chicago, 1922; reprinted 1981) pp. 29ff).

558
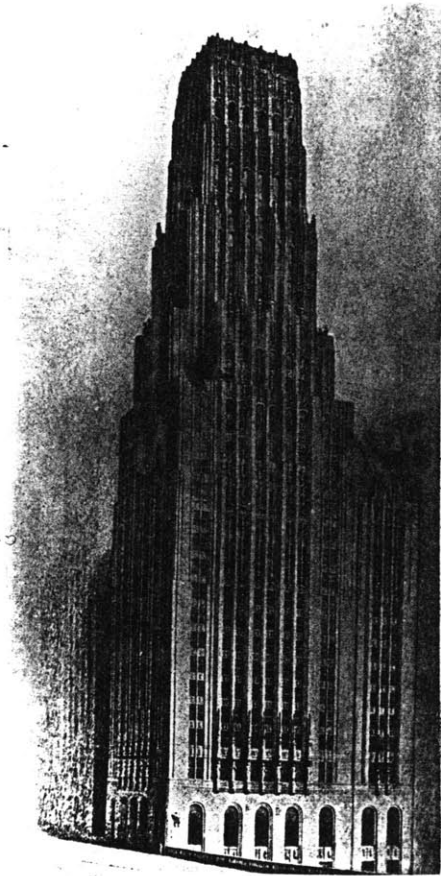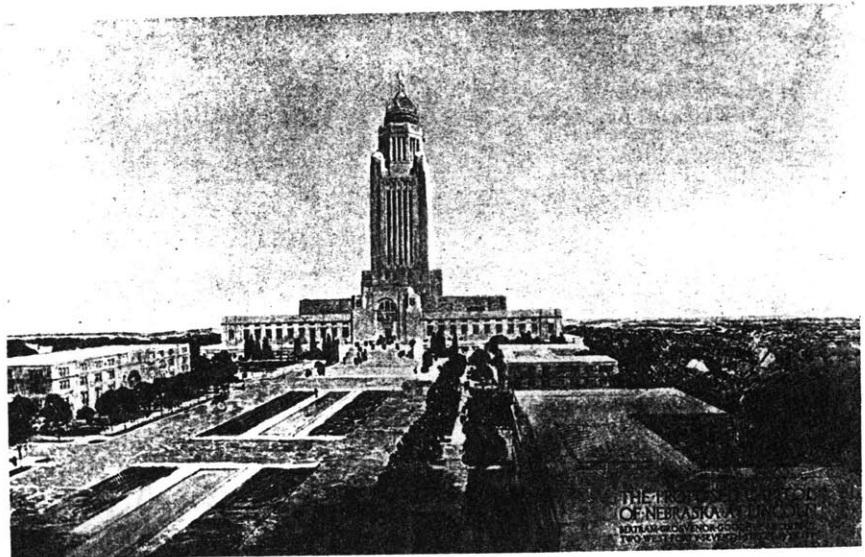
5.2
Nebraska State Capital, Lincoln,
Nebraska, Bertram Grosvenor
Goodhue, 1920-32, perspective by
Birch Burdette Long (Eugene Clute,
Drafting Room Practice (New York,
1928), p. 116).

5.3
Woolworth Building, New York City,
NY, Cass Gilbert, 1910-13 (Sheldon
Cheney, New World Architecture
(New York, 1930), p. 69).

559

5.4a
View of exhibition of American
architecture in Paris showing model
of Woolworth Building, 1921
("American Architecture in Europe,"
AIAJ 9 (1921): pp. 377-8).
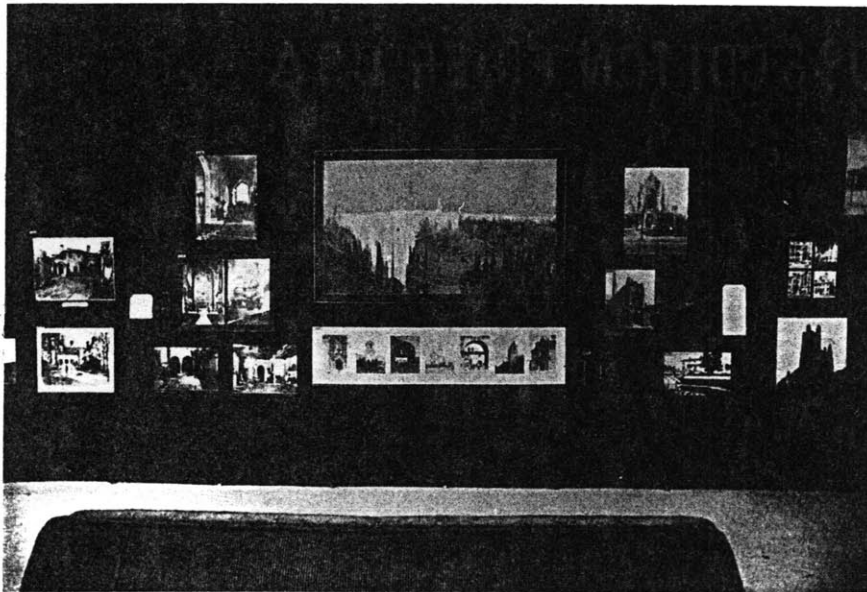
5.4b
Exhibition of American architecture
("American Architecture in Europe,"
AIAJ 9 (1921): pp. 377-8).
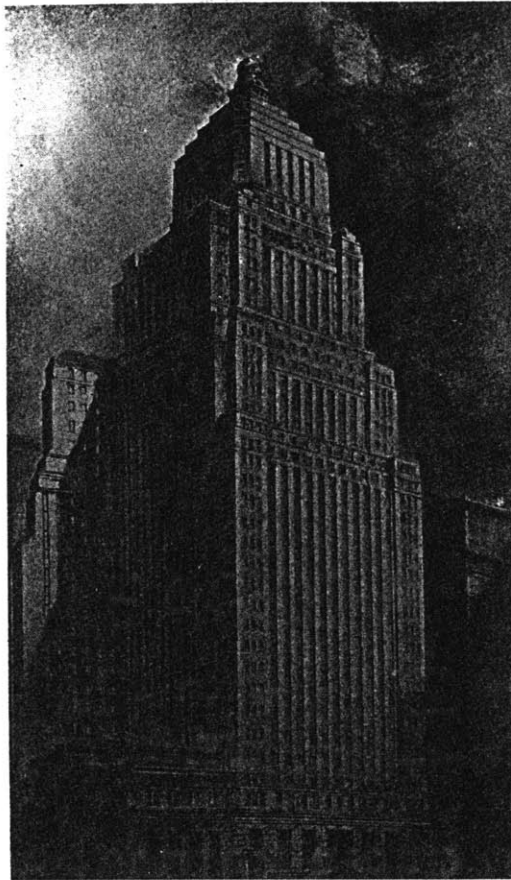
5.4c
"One of the Renderings that
Amazed Paris at American
Architecture was this striking view of
the Equitable Trust Building," from
AIAJ 15 (1927): p. 336.

5.5
Cathedral of Learning, University of
Pittsburgh, Pittsburgh, PA, Klauder
and Day, completed in 1931,
rendering by Charles Klauder
(Eugene Clute, Drafting Room
Practice (New York 1928), p.31).

PERFORATED MARBLE LEADED GLASS BRICK

THE CHARACTER OF ORNAMENT DETERMINED BY THE NATURE OF THE MATERIAL
EACH OF THESE DESIGNS HAS THE SAME MATHEMATICAL "WEB," THE ICOSAHEDRON

SKETCHES   Drawn by Mr. Goodhue
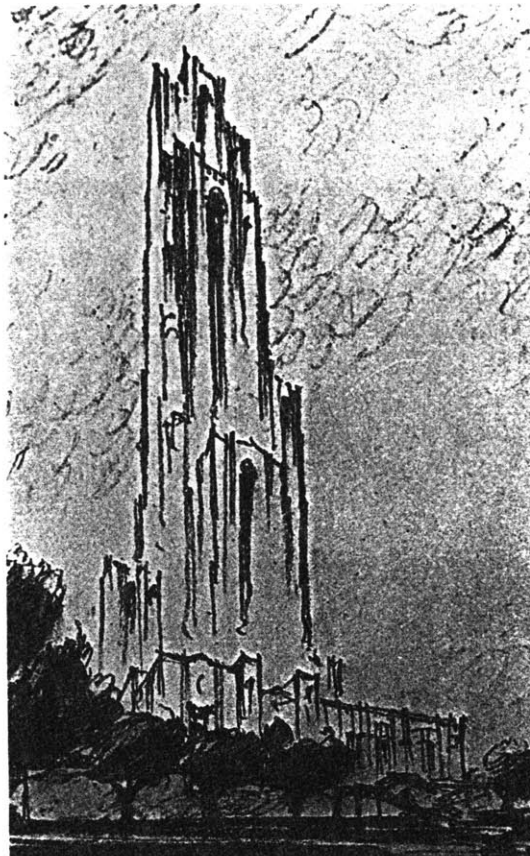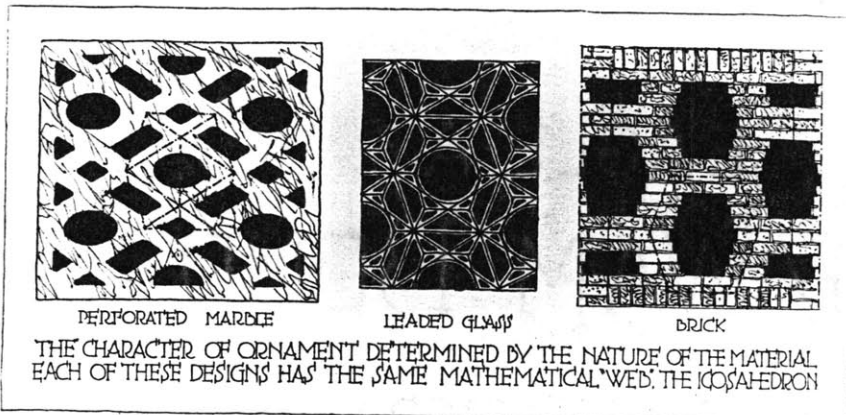
5.6
"The Character of Ornament
Determined by the Nature of the
Material," from Claude Bragdon,
"Ornament from Platonic Solids,"
AR 63 (May 1928): pp. 504-12.

5.7
Sketch of skyline of New York City
shown with fantastic images of
"Bagdad" (sic), "Saraz," and
"Babylon" (Charles Whitaker, ed.,
Bertram Grosvenor Goodhue -
Architect and Master of Many Arts
(New York, 1925), pl. 90).

THE
AMERICAN ARCHITECTURE
OF TO-DAY

G. H. EDGELL

CHARLES SCRIBNER'S SONS
NEW YORK · LONDON
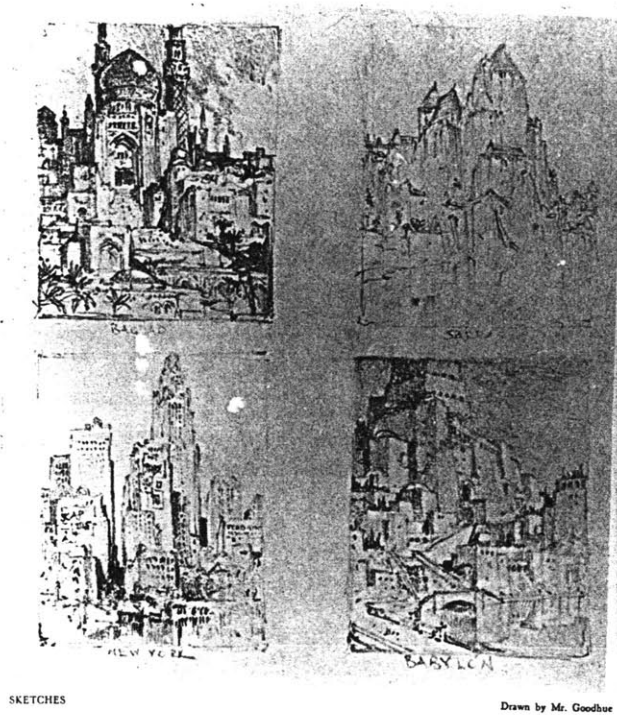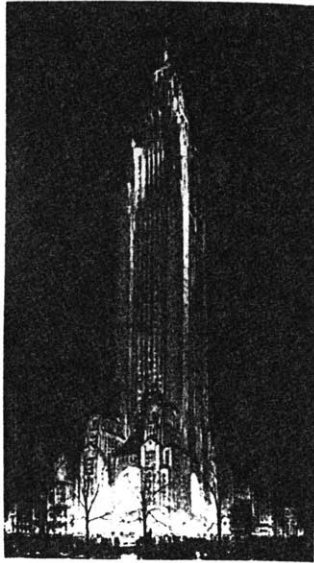
New York, N. Y. Proposed Office and Convocation Building,
Bertram G. Goodhue, Architect

5.8
Proposed Office and Convocational
Tower, Madison Square Garden,
New York City, NY, Bertram
Grosvenor Goodhue, ca. 1923, as it
appeared as the frontispiece to
George Edgell, American
Architecture of Today (New York,
1928).

5.9
Shelton Hotel, New York, NY,
Arthur Loomis Harmon, 1923-4
(Leo Friedlander, "The New
Architecture and the Master
Sculptor," AF 46 (January 1927): pp.
1-8).
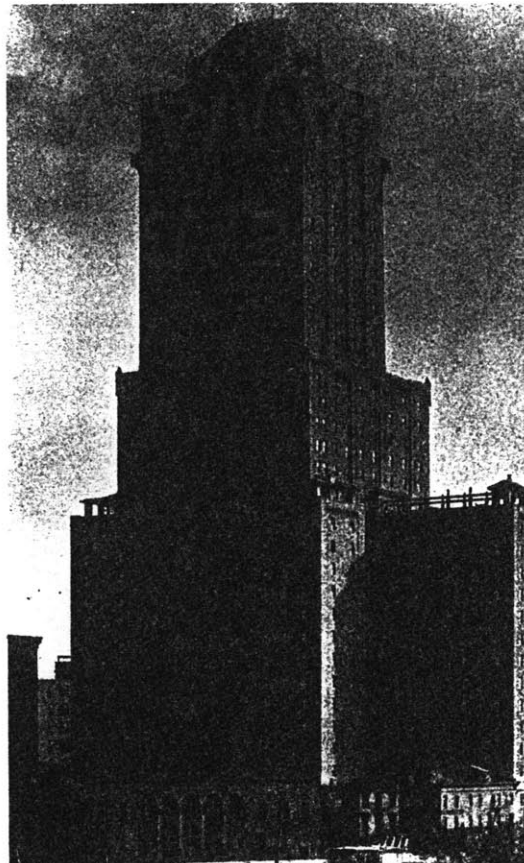
5.10
Metropolitan Life Building, New York City, NY, N. LeBrun and Sons, 1907 (Robert Stern et al, New York 1900: Metropolitan Architecture and Urbanism, 1890-1915 (New York, 1983), p. 172).
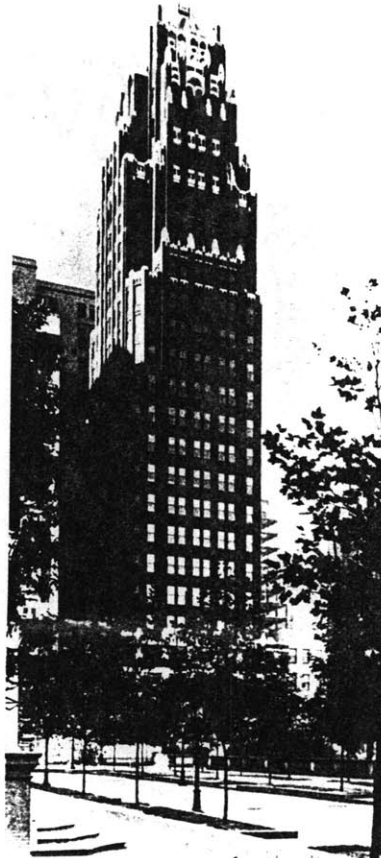
5.11
American Radiator Building, New York City, NY, Raymond Hood, 1924 (George Edgell, American Architecture of Today (New York 1928)).
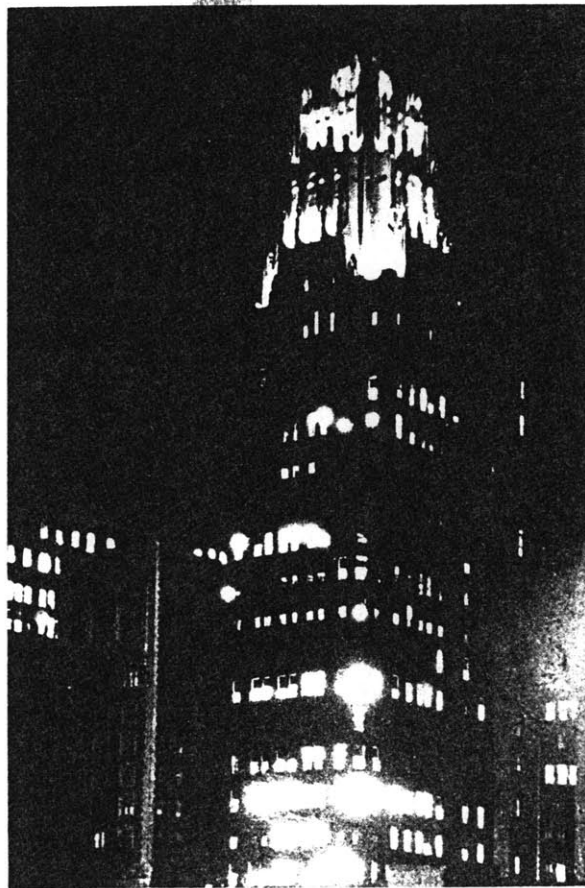
5.12
"What is Wanted in New York is More Daring Experiments Like the American Radiator Building to Stir the Public's Imagination," from AIAJ 15 (November 1927): p. 342.

5.13
Advertisement for American Radiator Company (NYT, 25 October 1927, p.2).

FIG A.

FIG. B

FIG. C

FIG. D.
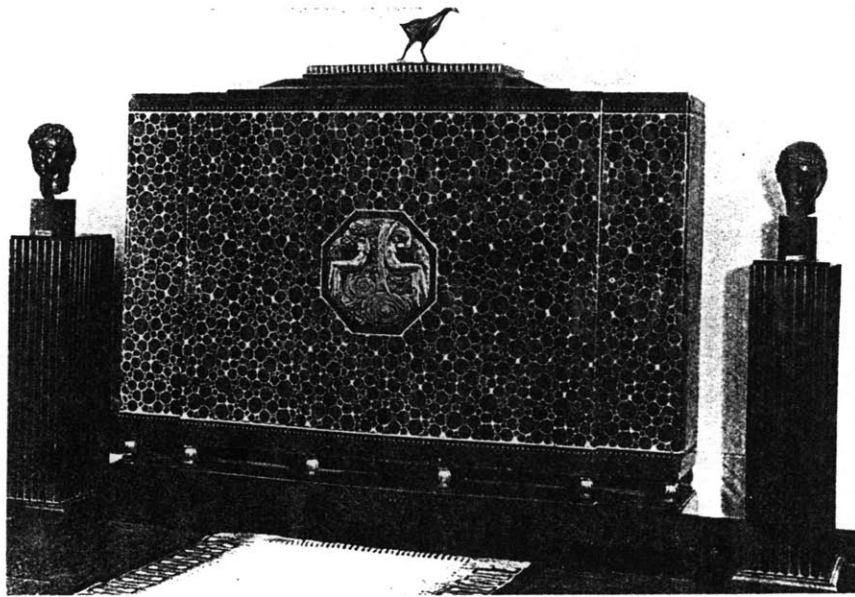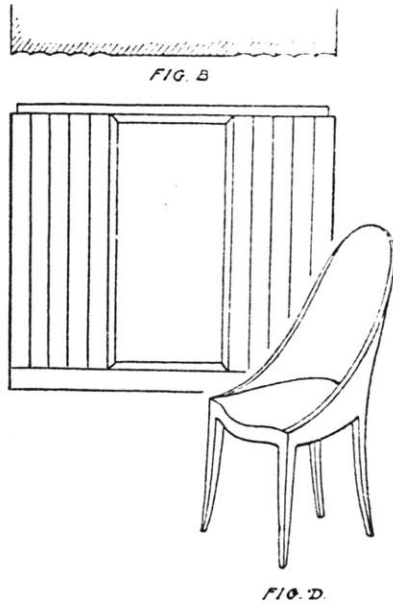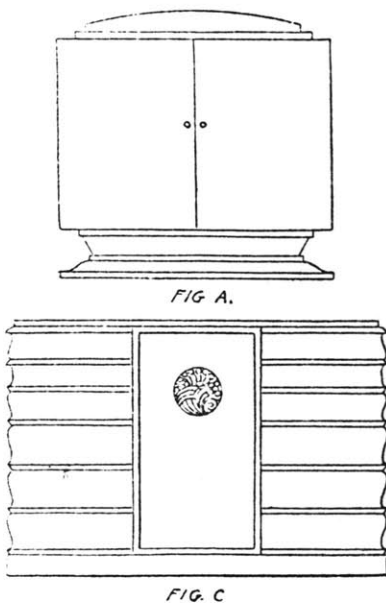
5.14
Drawing of furniture at Paris
Exposition, 1925, by H.P. Shapland
from Board of Overseas Trade,
Reports on the Present Position and
Tendencies of the Industrial Arts as
Indicated at the International
Exhibition of Modern Decorative
and Industrial Arts (Paris 1925), p.
38.

5.15
Cabinet by Jacques Ruhlman in
exhibit "L'Ambassador Francaise," at
Paris Exposition, 1925 (Board of
Overseas Trade, Reports on the
Present Position and Tendencies of
the Industrial Arts as Indicated at
the International Exhibition of
Modern Decorative and Industrial
Arts (London 1927), p. 25).
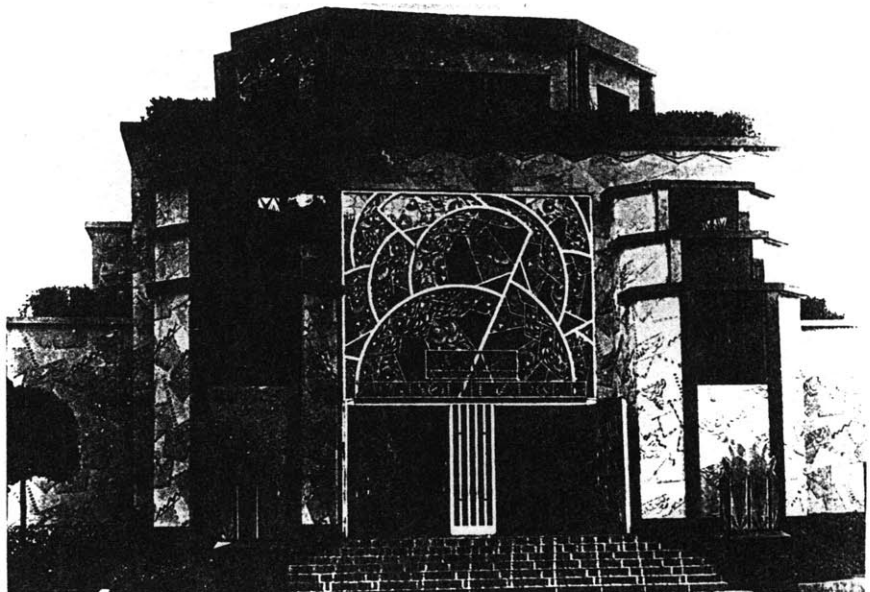
5.16
Pavilion Bon Marche, Paris
Exposition, L.H. Boileau, 1925
(Frank Scarlett and Marjorie
Townley, Art Decoratifs, 1925
(London, 1975)).

5.17
Pavilion de Lyons-St. Etienne, Paris
Exposition, Tony Garnier, 1925
(Frank Scarlett and Marjorie
Townley, Art Decoratifs, 1925
(London, 1975)).
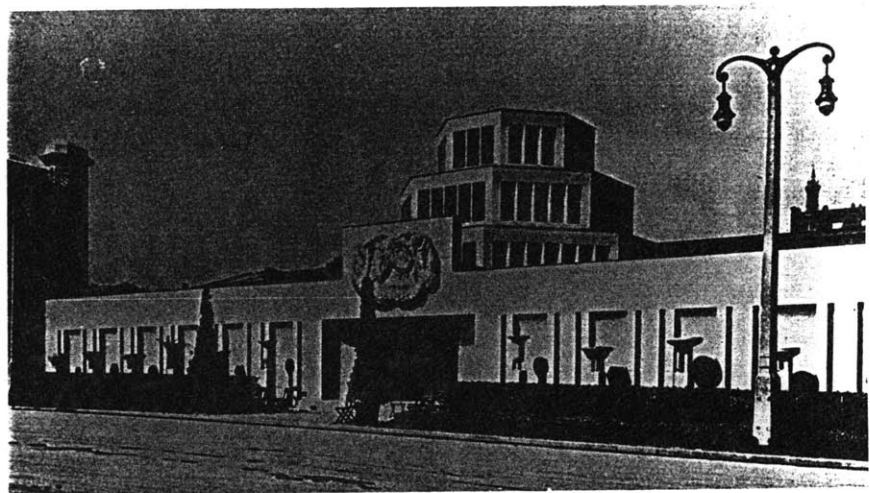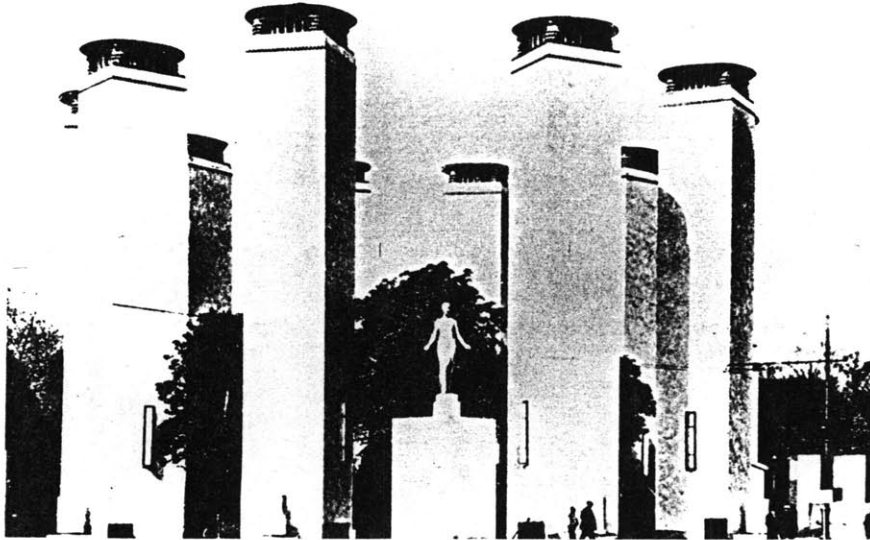
5.18
La Porte de la Concorde, Paris Exposition, Pierre Patout, 1925 (Frank Scarlett and Marjorie Townley, Art Decoratifs, 1925 (London, 1975)).
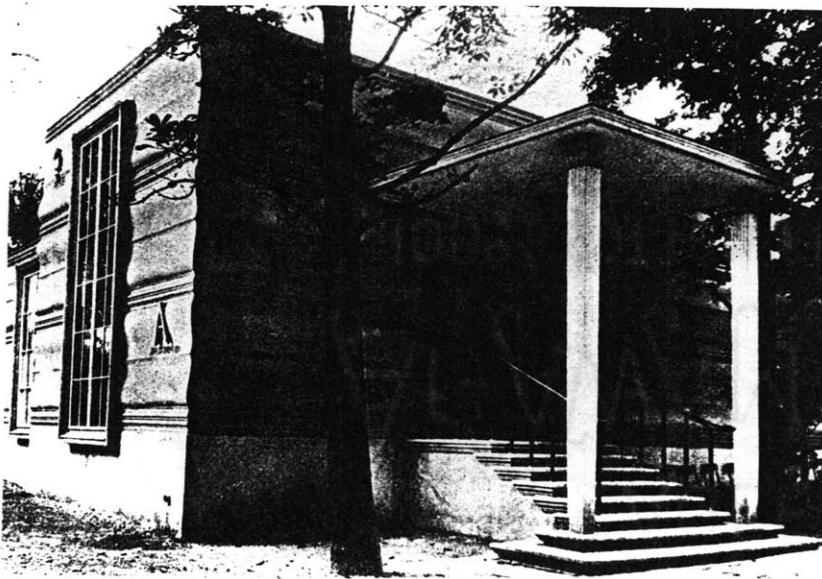
5.19
Pavilion of Austria, Paris Exposition, Josef Hoffman, 1925 (Frank Scarlett and Marjorie Townley, Art Decoratifs, 1925 (London, 1975)).
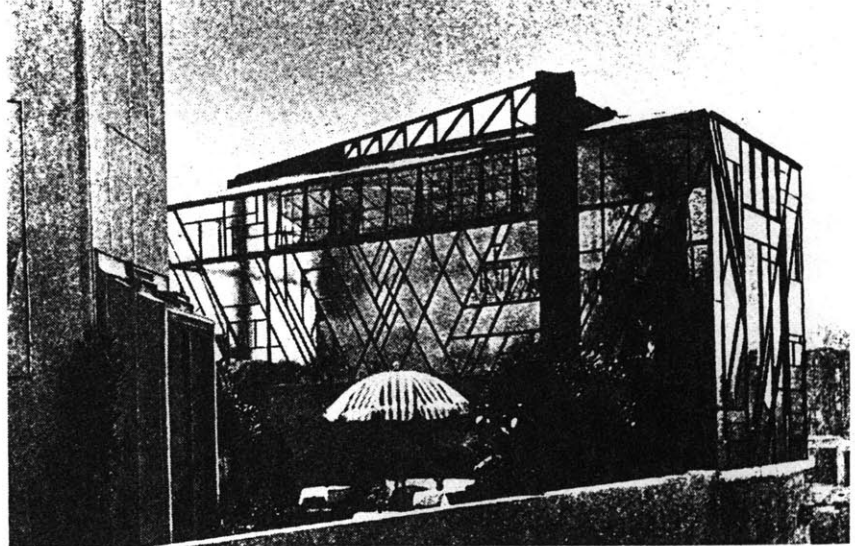
5.20
Roof-top Pavilion, Paris Exposition,
Hoffman, 1925 (Sheldon Cheney,
The New World Architecture (New
York 1930)).

5.21
Pavilion of Poland, Paris Exposition,
1925 (E.A. Park, New Backgrounds
for a New Age (New York, 1927),
fig. 28).
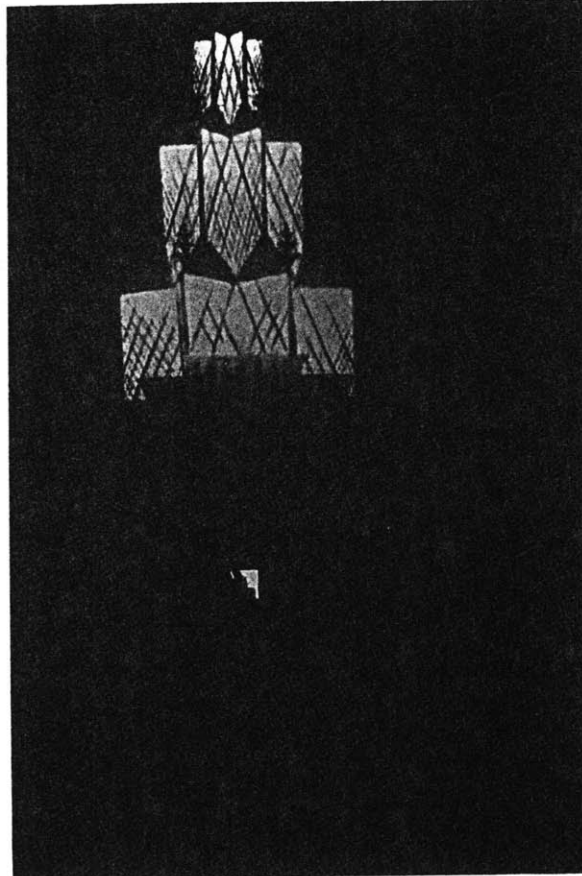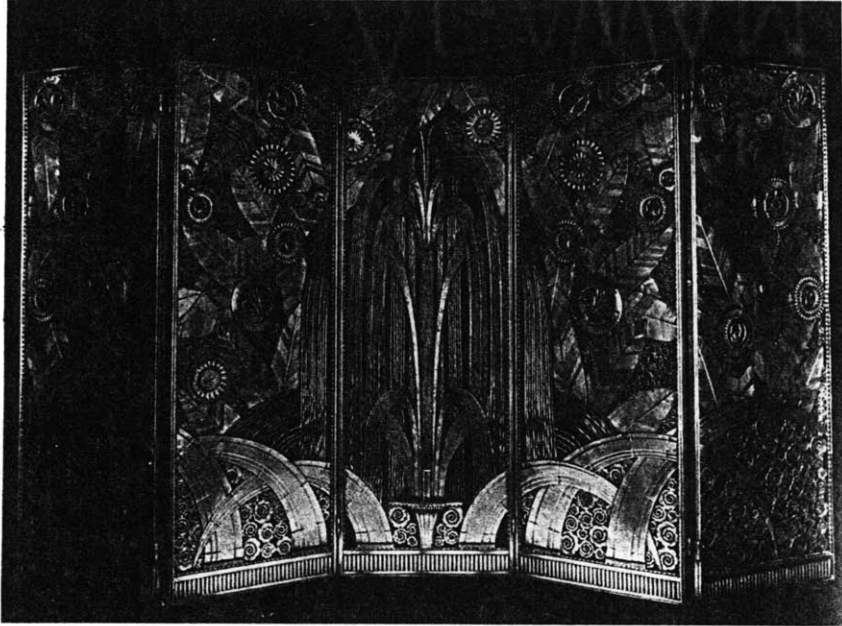
5.22
"Oasis," Iron Grill, Edgar Brandt, ca. 1925 (Yvonne Brunhammer, Le Style 1925 (Paris 1977)).
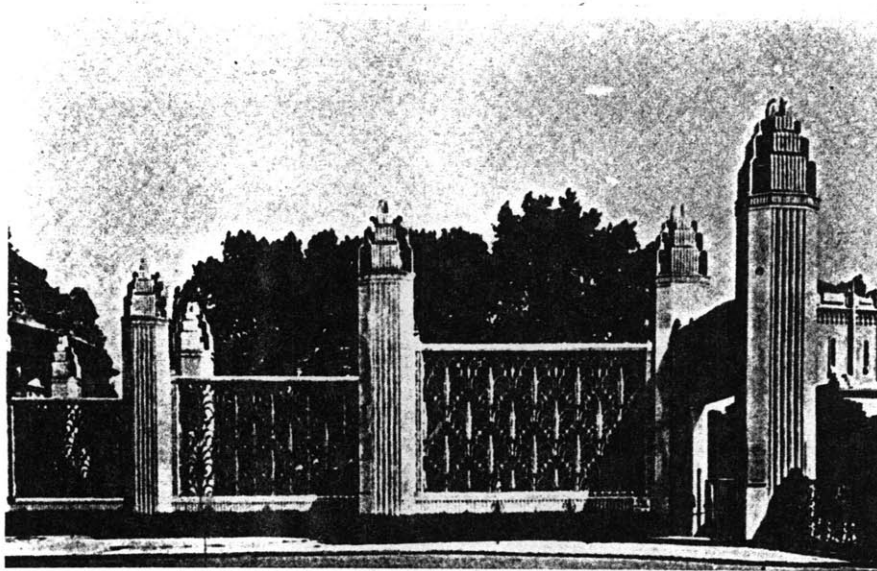
5.23
La Porte d'Honneur, Paris Exposition, Favier and Ventre, 1925 (Giulia Veronesi, Stile 1925: ascesa e caduta delle Arts Deco (Florence 1978), fig. 49).

5.24
Print, Raoul Dufy, ca. 1925 (Board of Overseas Trade, <u>Reports on the Present Position and Tendencies of the Industrial Arts as Indicated at the International Exhibition of Modern Decorative and Industrial Arts</u> (London 1927)).

5.25
Fabric design, Sonia Delauney, ca. 1923 (Giulia Veronesi, <u>Stile 1925: ascesa e caduta delle Arts Deco</u> (Florence 1978), p. 40).
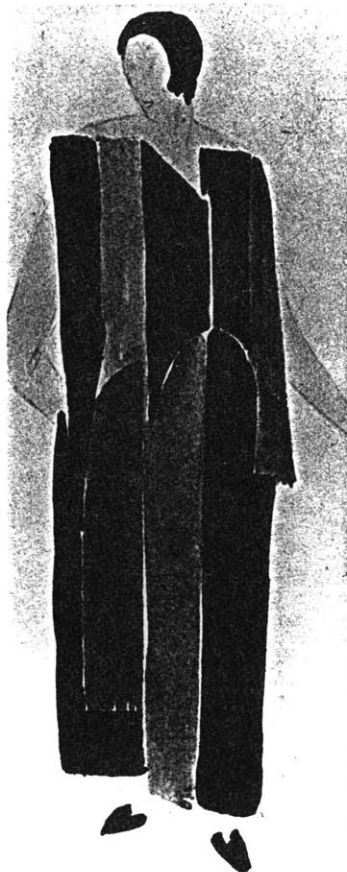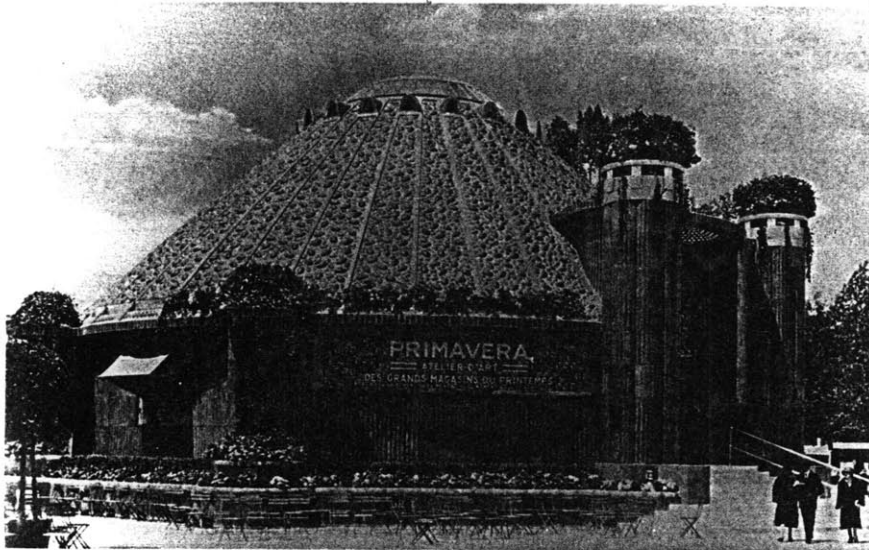
5.26
Pavilion of "Primavera," Printemps
Department Store, Paris Exposition,
Henri Sauvage, 1925 (Board of
Overseas Trade, Reports on the
Present Position and Tendencies of
the Industrial Arts as Indicated at
the International Exhibition of
Modern Decorative and Industrial
Arts (London 1927)).

5.27
Interior by Lord & Taylor
Department Store, ca. 1925 (E.A.
Park, New Backgrounds for a New
Age (New York, 1927), fig. 53).
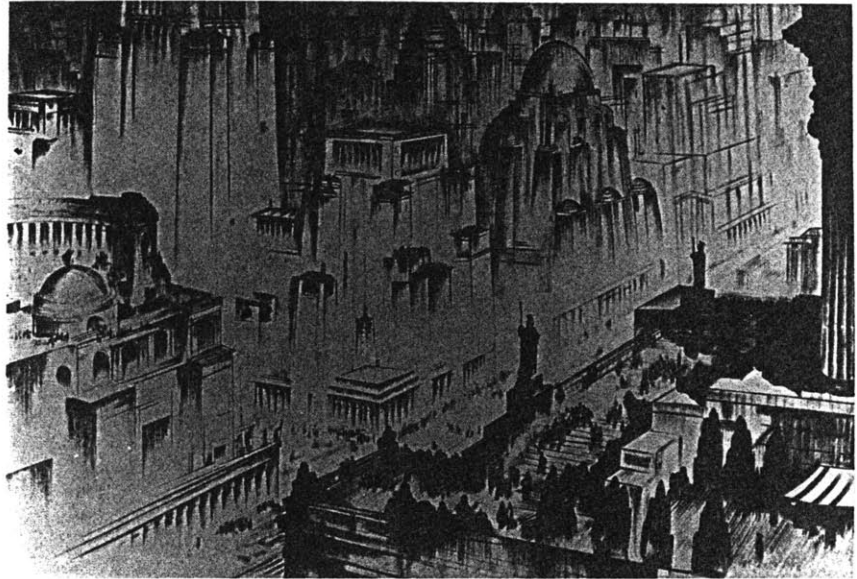
5.28
Rendering by Hugh Ferriss exhibited at the "Titan City Exposition," John Wanamaker Store, New York City, 1925 ("The Titan City Exposition," AR 61 (January 1926): pp. 92-4).

5.29
Interior by Vladimir Bobritsky and Victor Havemann for the John Wanamaker Store, New York City, 1925 (E.A. Park, New Backgrounds for a New Age (New York, 1927), fig. 48).
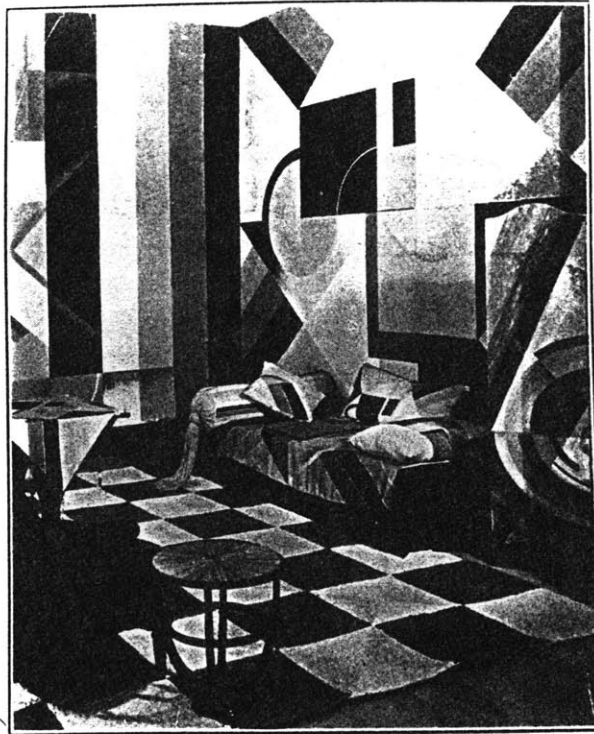
Courtesy of John Wanamaker

FIG. 48—MODERNIST INTERIOR
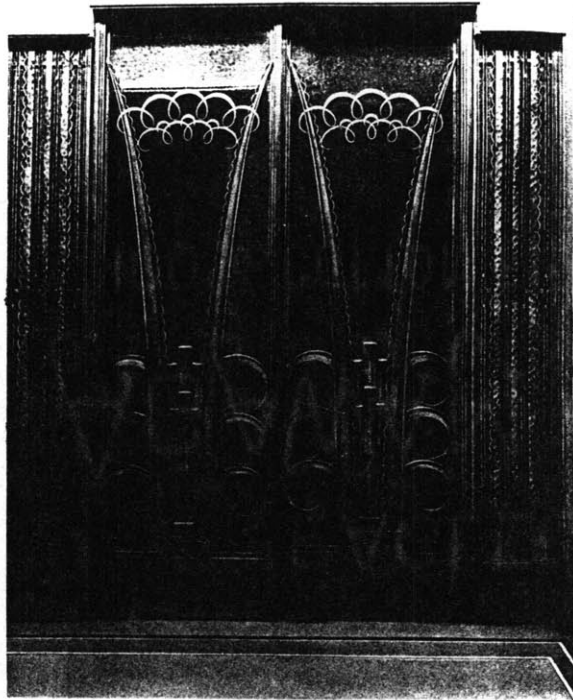
ELEVATOR DOORS OF S.S. *ILE-DE-FRANCE*
RAYMOND SUBES, METAL CRAFTSMAN
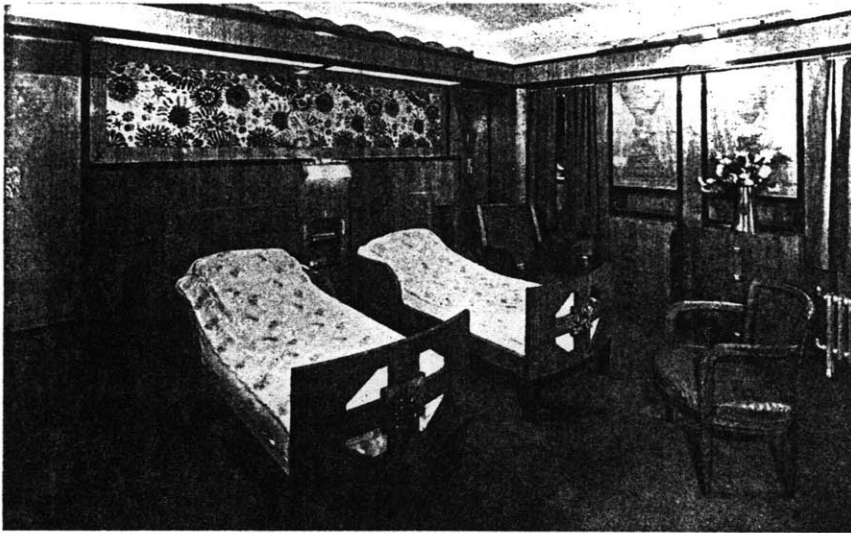
5.30

Elevator doors of the Ile de France, ca. 1926 ("Interiors from the Ile de France," AR 63 (January 1928): p. 62-4).

5.31

Stateroom from the Ile de France, ca. 1926 ("Interiors from the Ile de France," AR 63 (January 1928): p. 62-4).
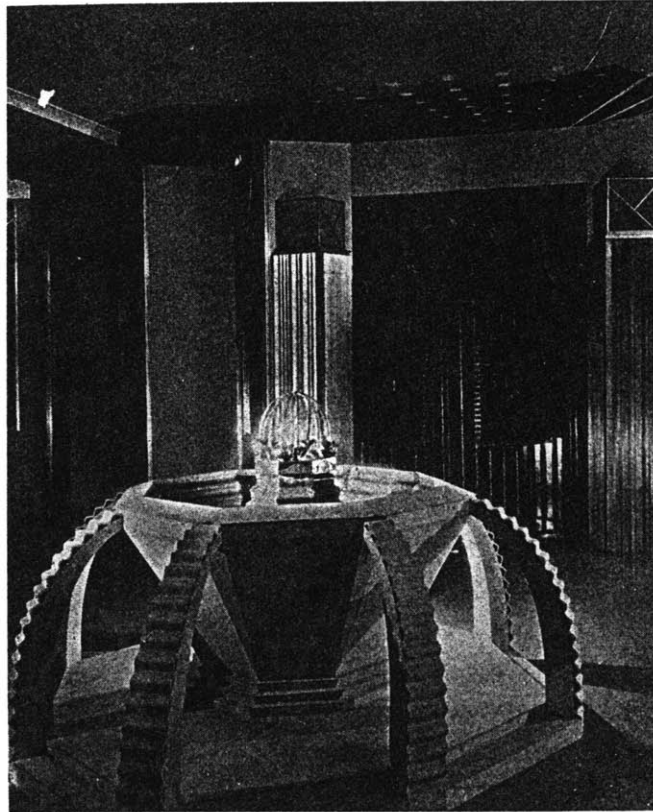
5.32
Fountain, Art-in-Trade Exhibition,
Macy's Department Store, New
York, NY, Lee Simonson, 1928 (AR
64 (August 1928): p. 139).
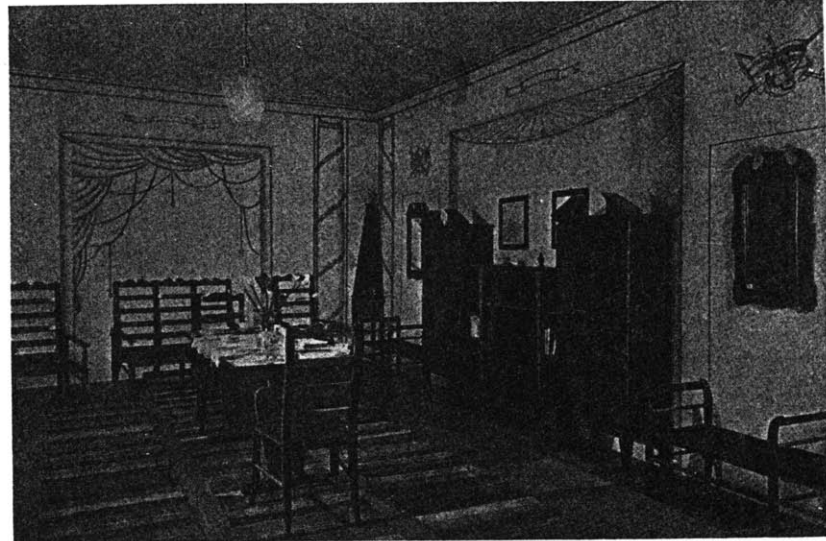
5.33
"Living Room," Art-in-Trade
Exhibition, Macy's Department
Store, New York, NY, Gio Ponti,
1928 (AR 64 (August 1928): p. 139).
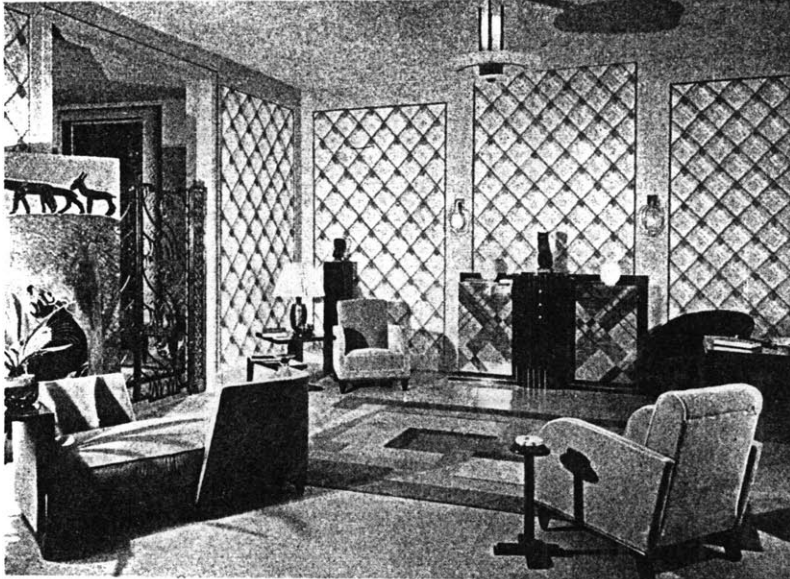
5.34
"Studio/Living Room," Art-in-Trade
Exhibition, Macy's Department
Store, New York, NY, Jourbet &
Petit, 1928 (AR 64 (August 1928): p.
142).
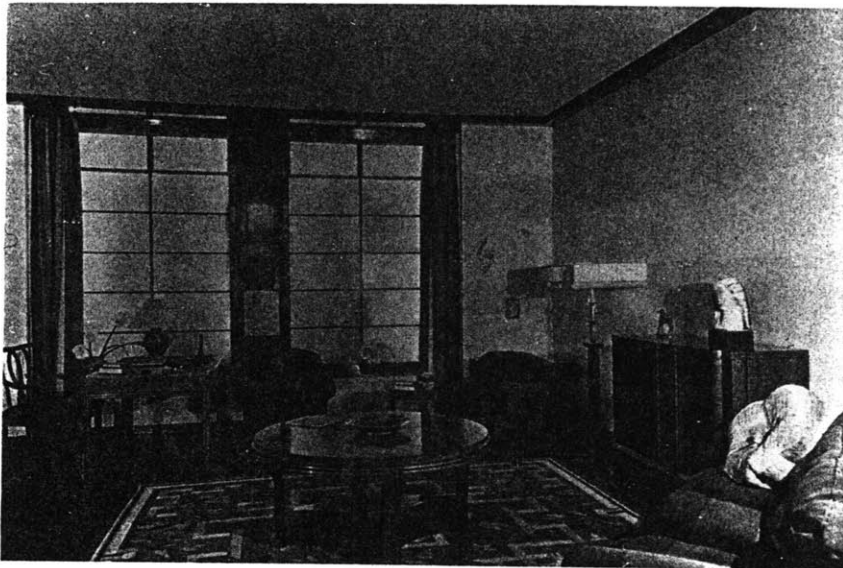
5.35
"A Man's Study," Art-in-Trade
Exhibition, Macy's Department
Store, New York, NY, Bruno Paul,
1928 (AR 64 (August 1928): p. 143).
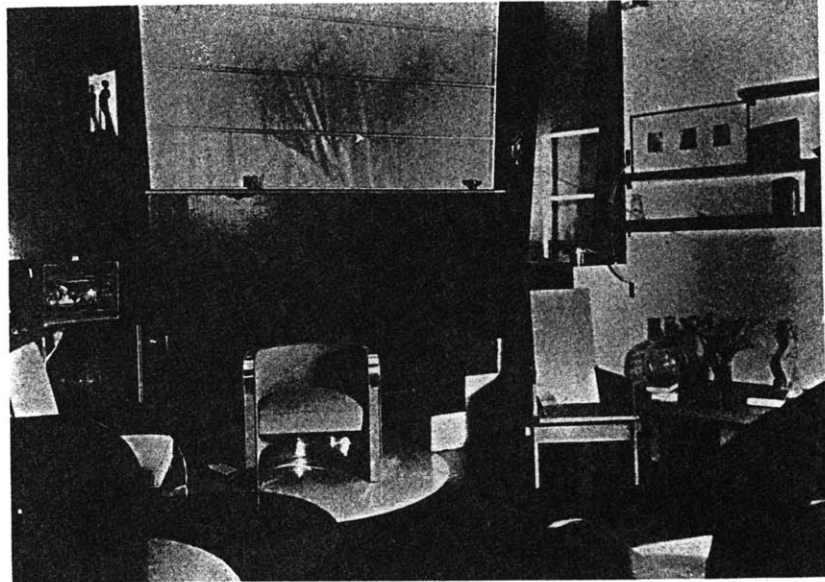
5.36
"Penthouse Studio," Art-in-Trade
Exhibition, Macy's Department
Store, New York, NY, William
Lescaze, 1928 (AR 64 (August 1928):
p. 138).

5.37
"Living Room-Bedroom," Art-in-
Trade Exhibition, Macy's
Department Store, New York, NY,
Kem Weber, 1928 (AR 64 (August
1928): p. 143).
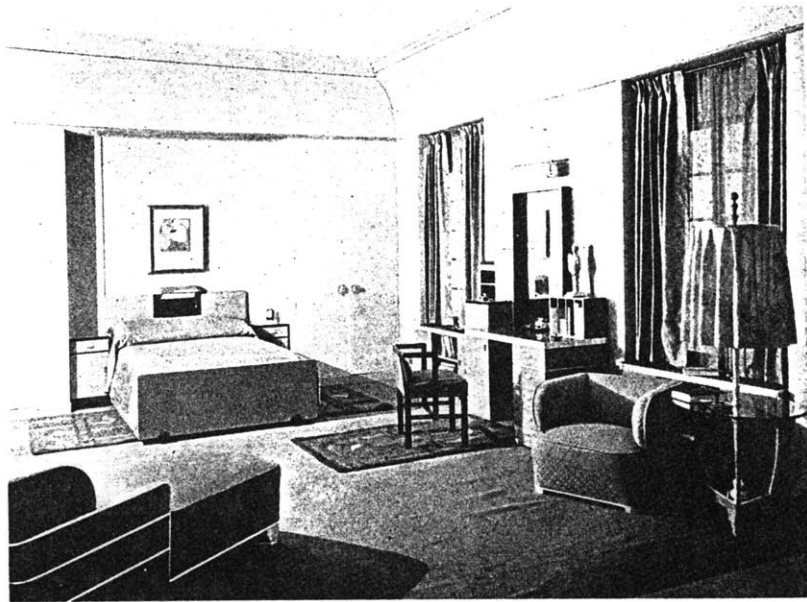
5.38
"Dining Alcove/Kitchenette," Art-in-Trade Exhibition, Macy's Department Store, New York, NY, Kem Weber, 1928 (AR 64 (August 1928): p. 143).
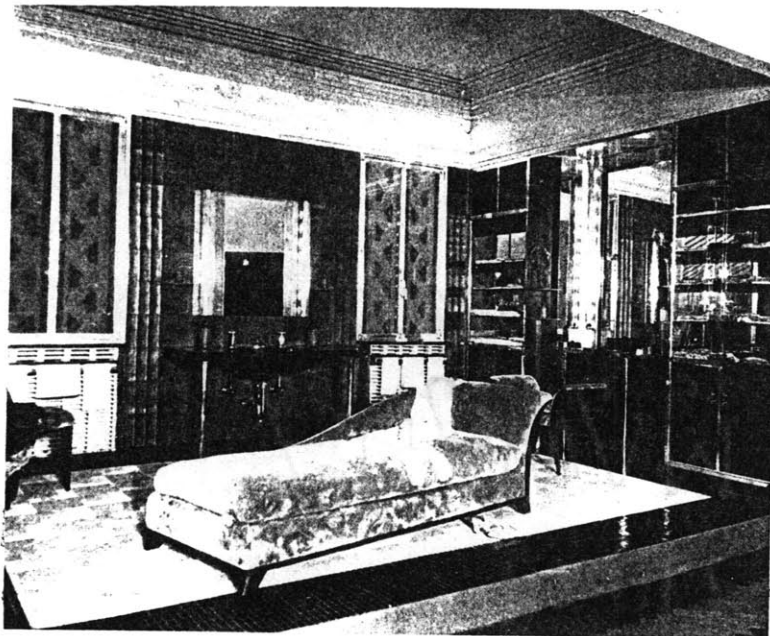
5.39
"Bath and Dressing Room," exhibited at "The Architect and the Industrial Arts," Metropolitan Museum, New York, NY, Ely Jacques Kahn, 12 February - 24 March 1929 (Exhibition Catalog, "The Architect and the Industrial Arts," Metropolitan Museum of Art (New York, 1929)).
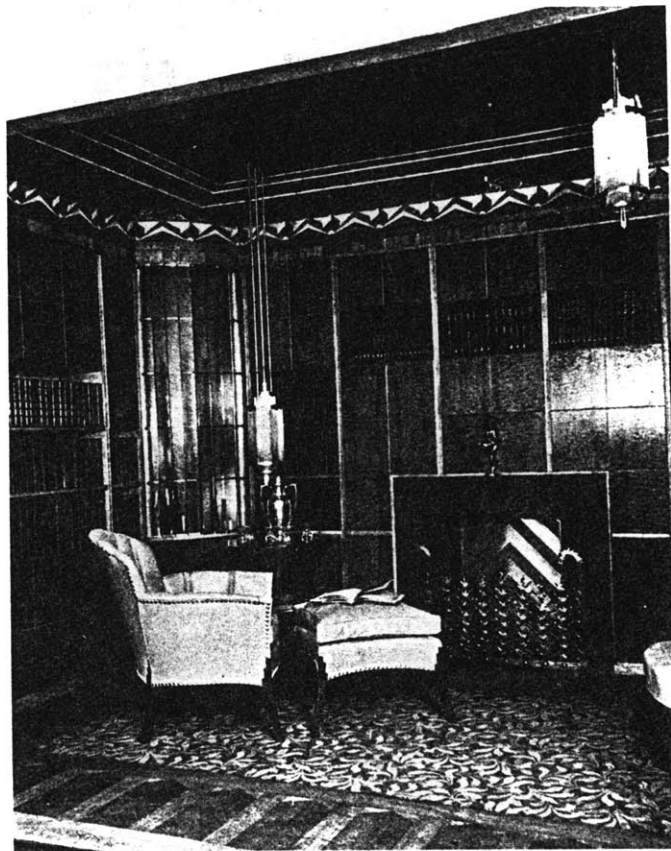
5.40
"A Man's Study for a Country House," exhibited at "The Architect and the Industrial Arts," Metropolitan Museum, New York, NY, Ralph Walker, 12 February - 24 March 1929 (Exhibition Catalog, "The Architect and the Industrial Arts," Metropolitan Museum of Art (New York, 1929)).

5.41
"A Woman's Bedroom," exhibited at "The Architect and the Industrial Arts," Metropolitan Museum, New York, NY, John W. Root, 12 February - 24 March 1929 (Exhibition Catalog, "The Architect and the Industrial Arts," Metropolitan Museum of Art (New York, 1929)).
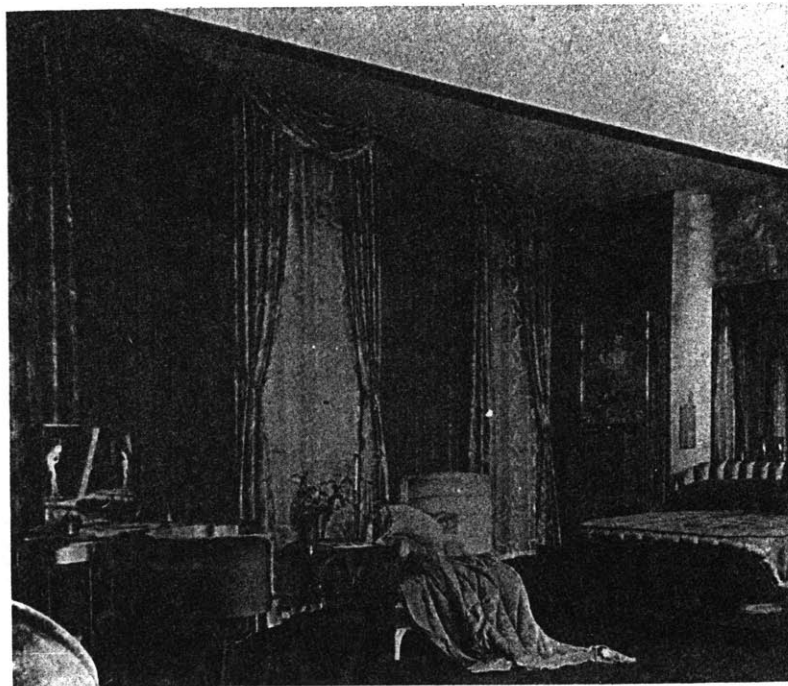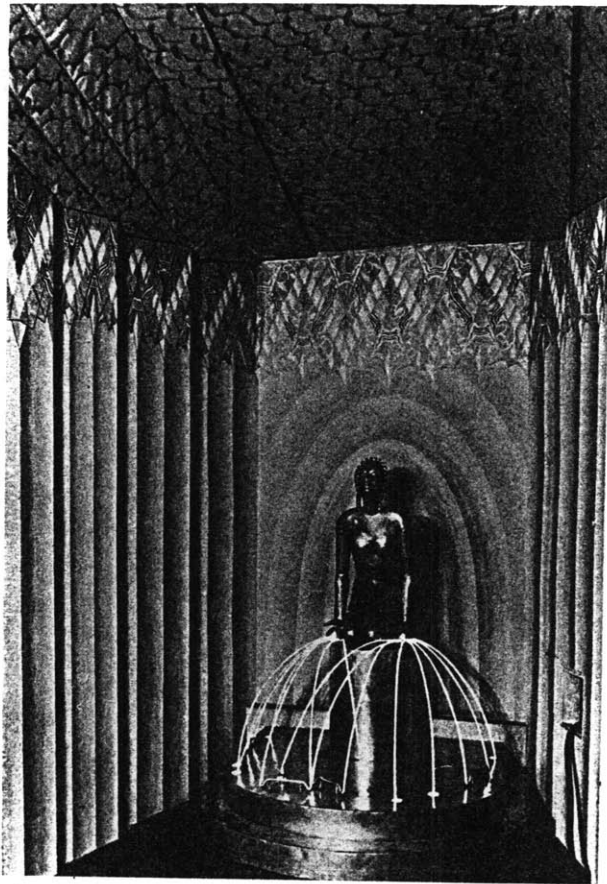
5.42
"A Sales Room," exhibited at "The Architect and the Industrial Arts," Metropolitan Museum, New York, NY, Ralph Walker, 12 February - 24 March 1929 (Exhibition Catalog, "The Architect and the Industrial Arts," Metropolitan Museum of Art (New York, 1929)).
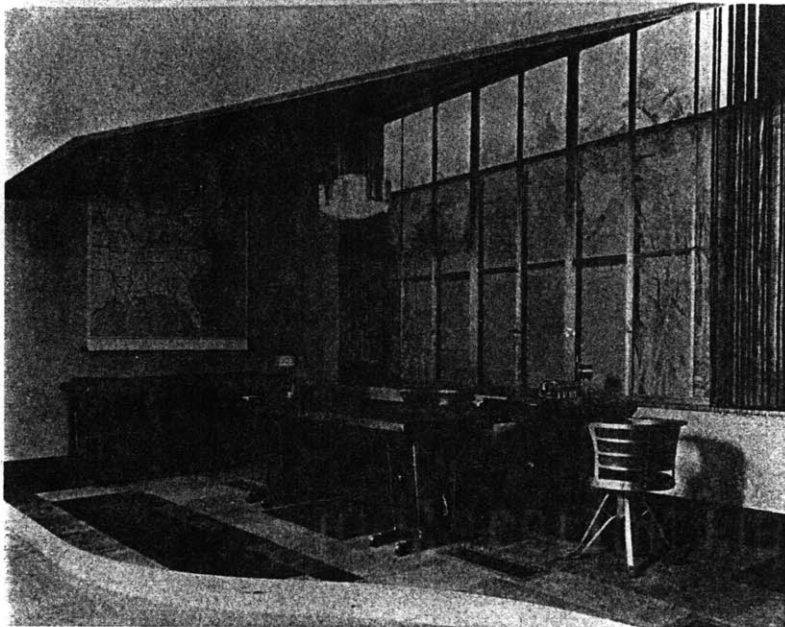
5.43
"Business Executive's Office," exhibited at "The Architect and the Industrial Arts," Metropolitan Museum, New York, NY, Raymond Hood, 12 February - 24 March 1929 (Exhibition Catalog, "The Architect and the Industrial Arts," Metropolitan Museum of Art (New York, 1929)).
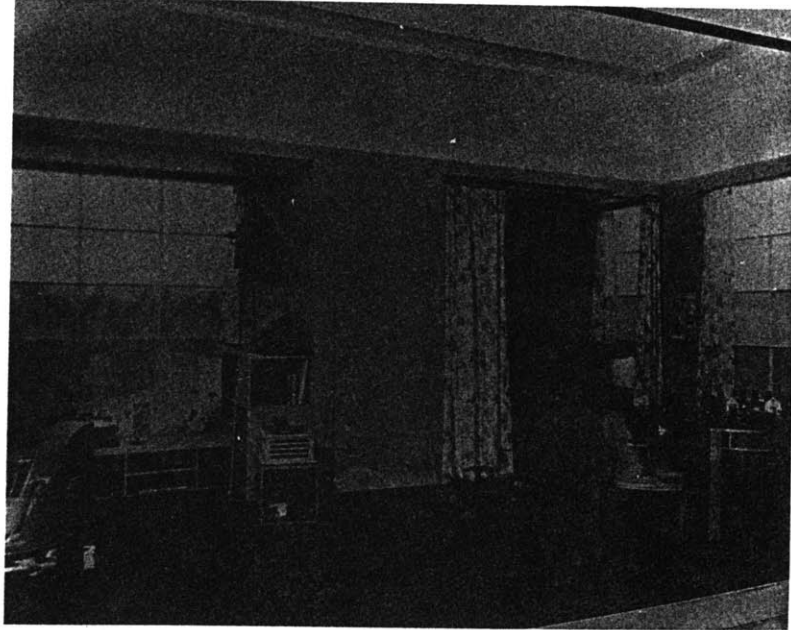
5.44
"A Child's Room," exhibited at "The Architect and the Industrial Arts," Metropolitan Museum, New York, NY, Eugene Schoen, 12 February - 24 March 1929 (Exhibition Catalog, "The Architect and the Industrial Arts," Metropolitan Museum of Art (New York, 1929)).

5.45
"Dining Room," exhibited at "The Architect and the Industrial Arts," Metropolitan Museum, New York, NY, Eliel Saarinen, 12 February - 24 March 1929 (Exhibition Catalog, "The Architect and the Industrial Arts," Metropolitan Museum of Art (New York, 1929)).
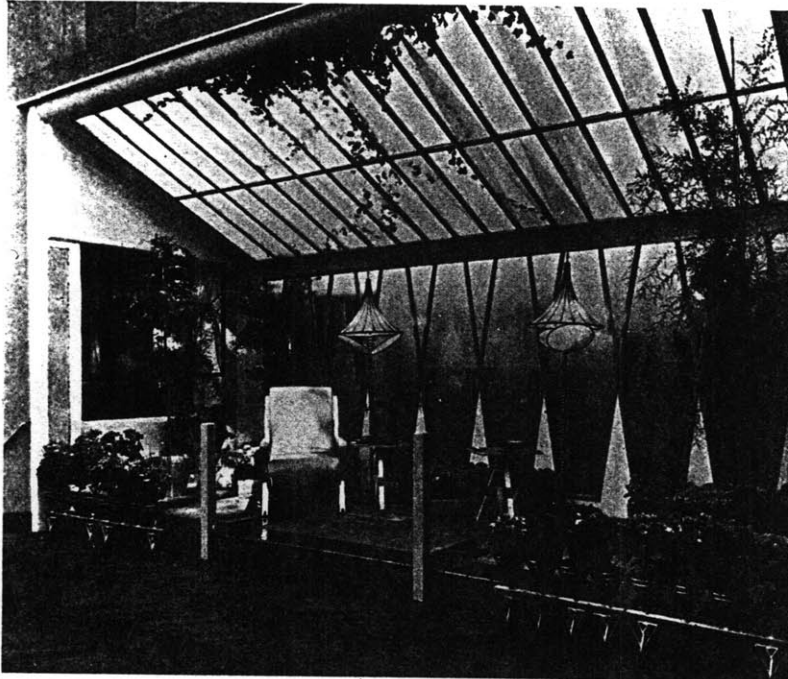
5.46
"A Conservatory," exhibited at "The Architect and the Industrial Arts," Metropolitan Museum, New York, NY, Joseph Urban, 12 February - 24 March 1929 (Exhibition Catalog, "The Architect and the Industrial Arts," Metropolitan Museum of Art (New York, 1929)).
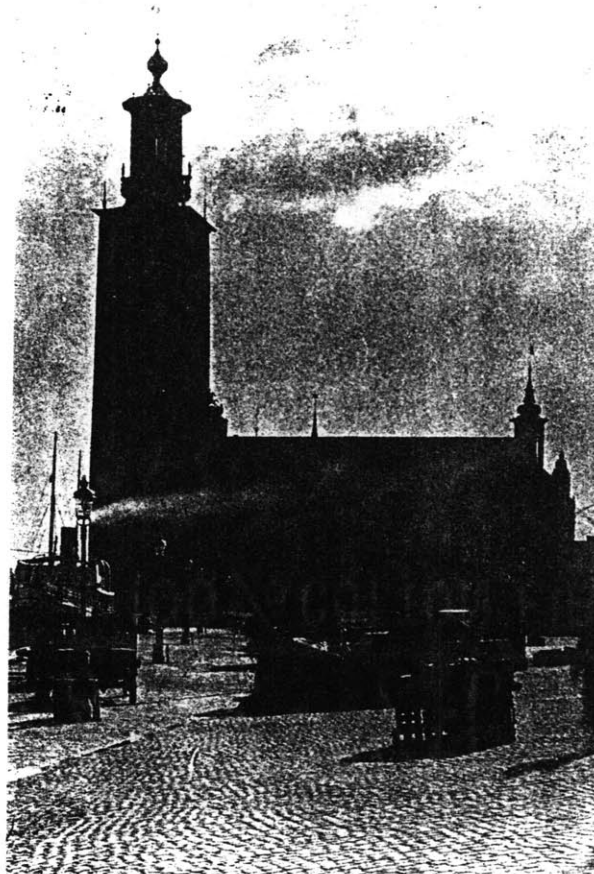
5.47
City Hall, Stockholm, Ragnar Ostberg, 1913 ("The Achievement of Ragnar Ostberg," AIAJ 15 (1927): pp. 192-205).
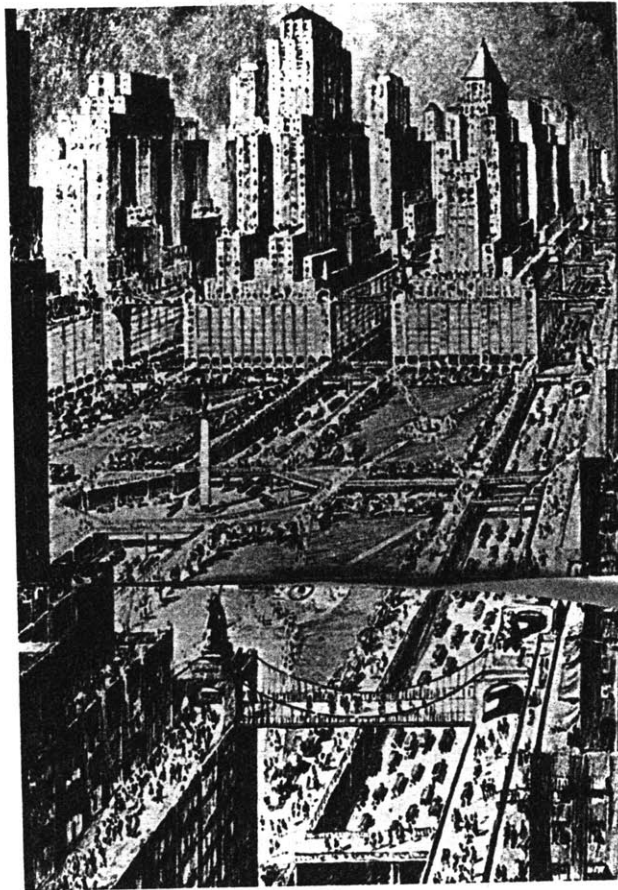
5.48
"A Vision of the City of the Future,"
by Harvey Wiley Corbett from
Corbett, "America's Great Gift to
Architecture," <u>NYT</u>, 18 March 1928.

5.49
"Huge Edifices Make Chicago a
Tower Town," with photograph, <u>CT</u>,
20 May 1928, 3:1.
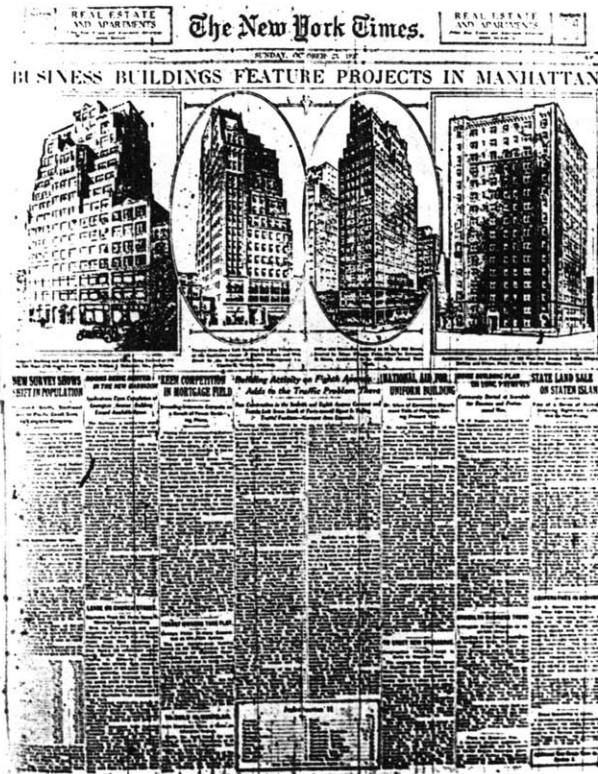
5.50
"Business Buildings Feature Projects in Manhattan," NYT, 23 October 1927, 11:1.
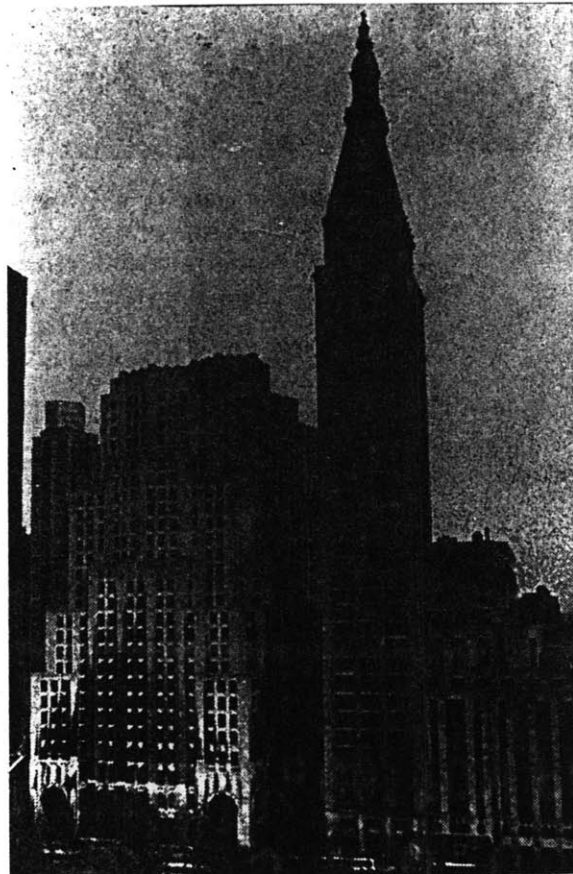
5.51
View of Metropolitan Life Tower as completed, New York, NY, Harvey Wiley Corbett with D. Everett Waid, 1930-33 (NYT April 1991).
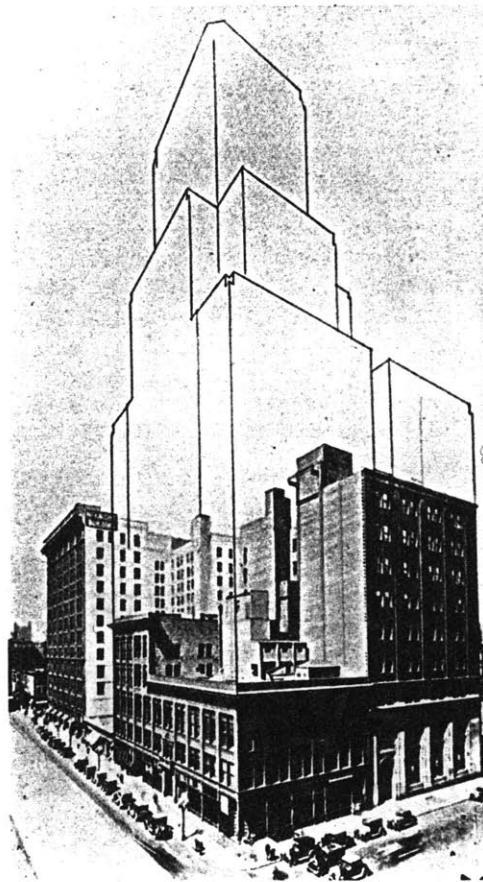
5.52
Proposed Northwestern Bell
Telephone Building, Minneapolis,
MN, Hewitt And Brown, ca. 1930,
drawing showing building envelope
in context (AF 52 (1930): pp. 786-7).

5.53
Proposed Northwestern Bell
Telephone Building (AF 52 (1930):
pp. 786-7).
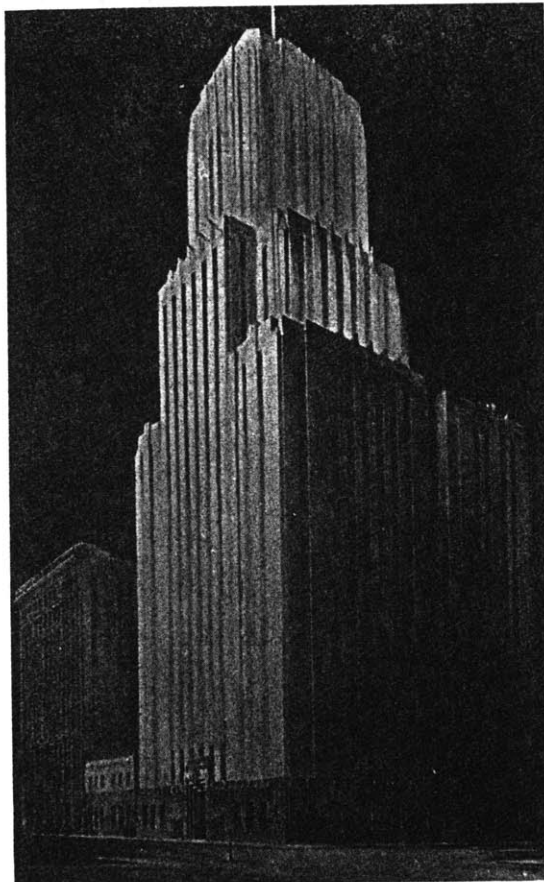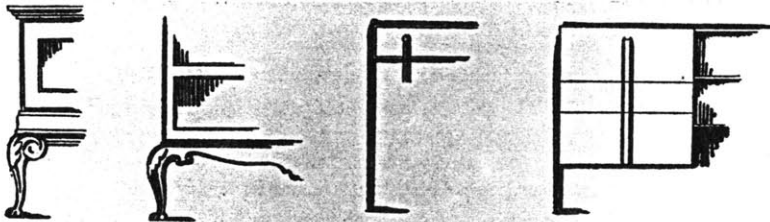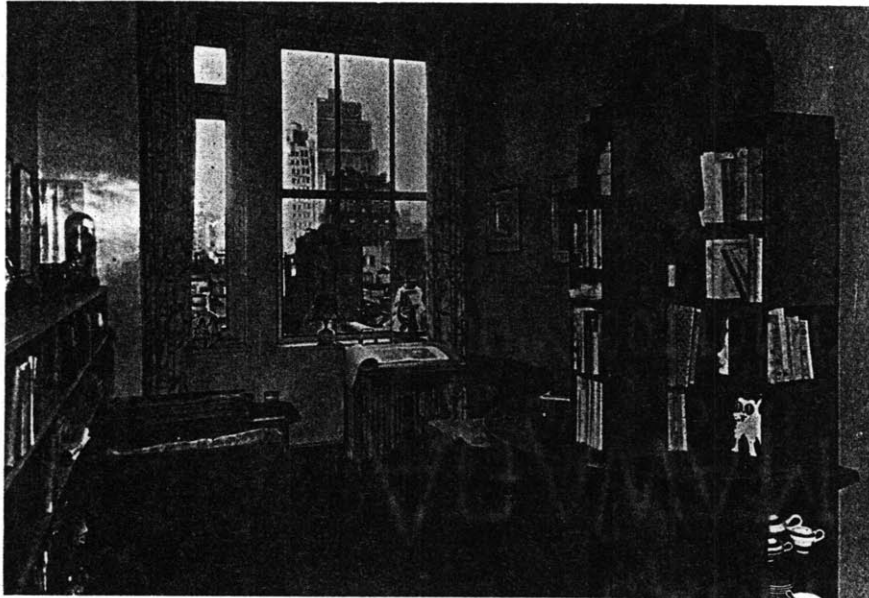
Old and new buffets, showing the difference in the structure of the legs.

Detail of Chippendale Bookcase Molding   Detail of Chippendale Book case Base   Detail of Skyscraper Book case top   Detail of Skyscraper Book case Base

5.55b
Proposed furniture details from Paul Frankl, New Dimensions: The Decorative Arts of today in Words and Pictures (New York, 1928), p. 39.

5.56
Drawing of Shelton Hotel by Hugh Ferriss used as advertisement for American Institute of Steel Contractors (AISC) (AF 46 (April 1927): p. 63).

587
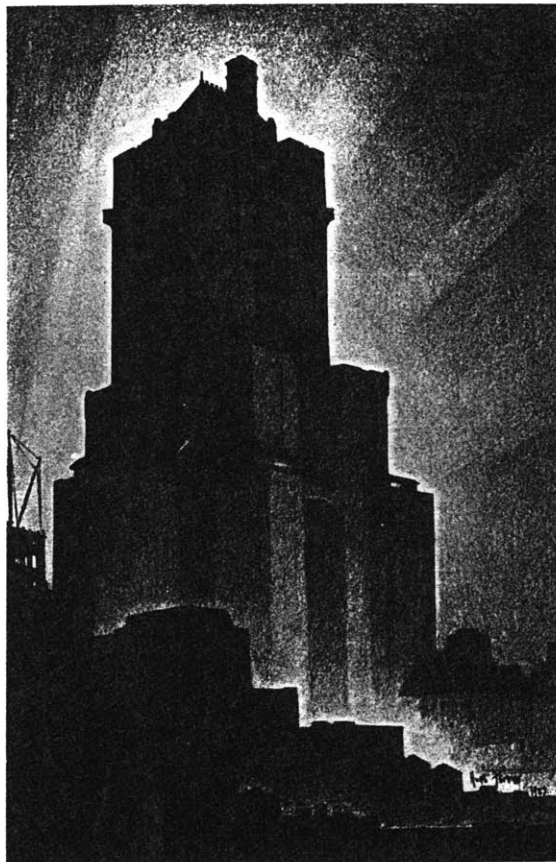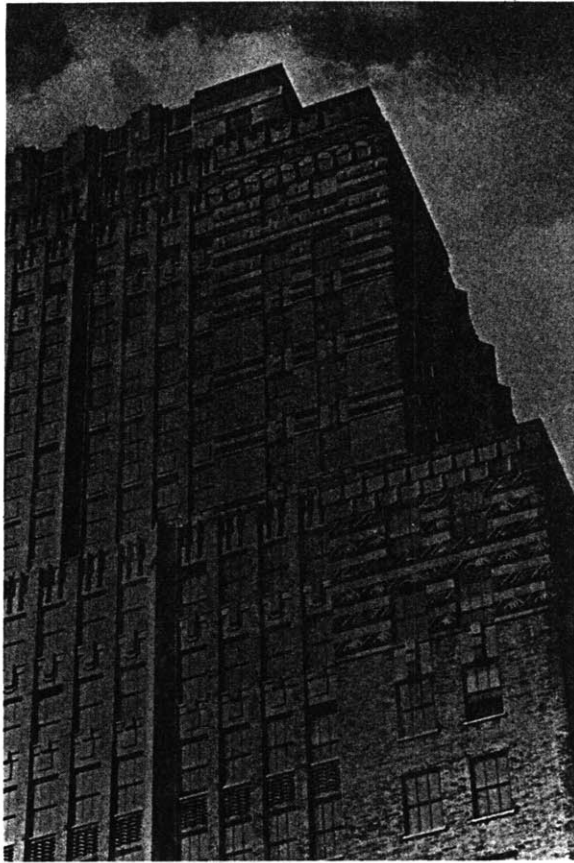
5.57
Park Avenue Building, New York, NY, Ely Jacques Kahn, 1927, view of top (AR 63 (April 1928): pp. 289-301).
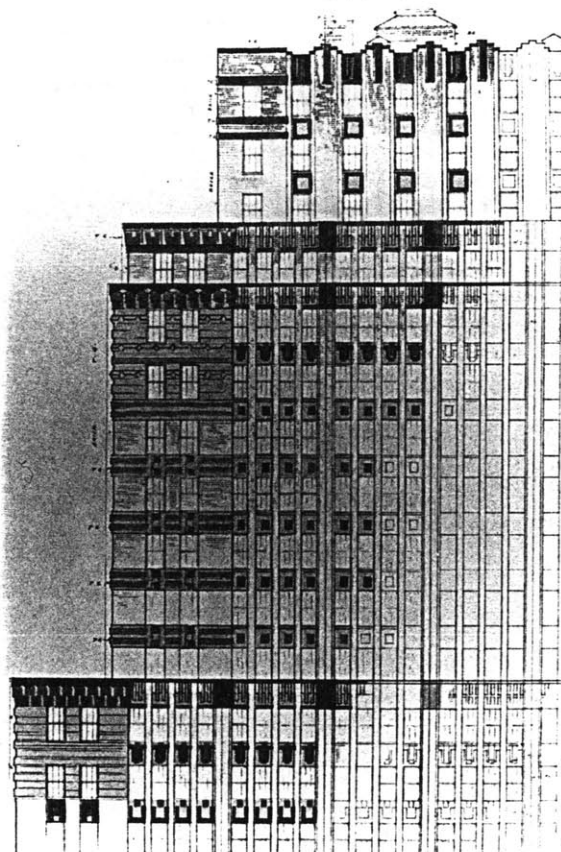
5.58
Park Avenue Building, elevation drawing (AR 63 (April 1928): pp. 289-301).
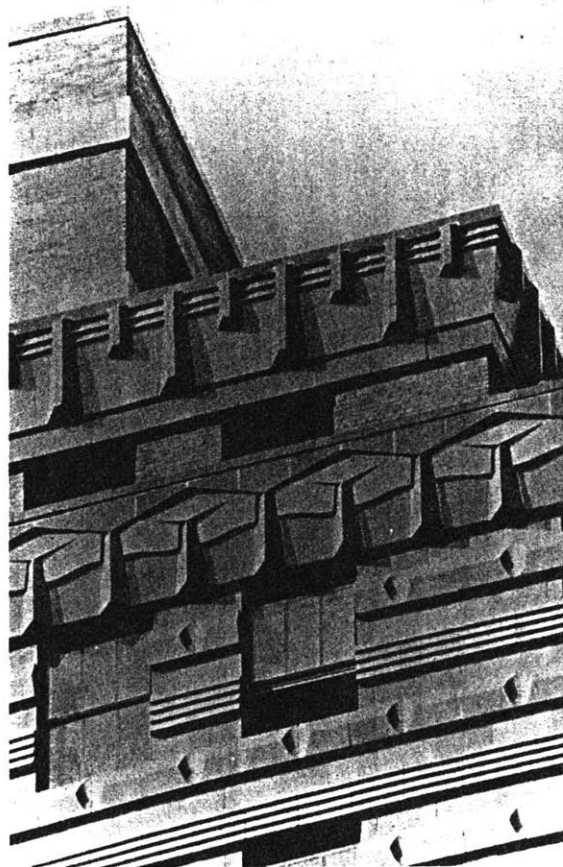
5.59
Park Avenue Building, detail (AR 63 (April 1928): pp. 289-301).

5.60
"Top floors of a skyscraper by Ely Jacques Kahn," from Sheldon Cheney, New World Architecture (New York 1930), p. 141).

PIONEERS: STRIPPED ARCHITECTURE

5.61
Advertisement for the New York Edison Company, NYT, 16 October 1927, p. 13.
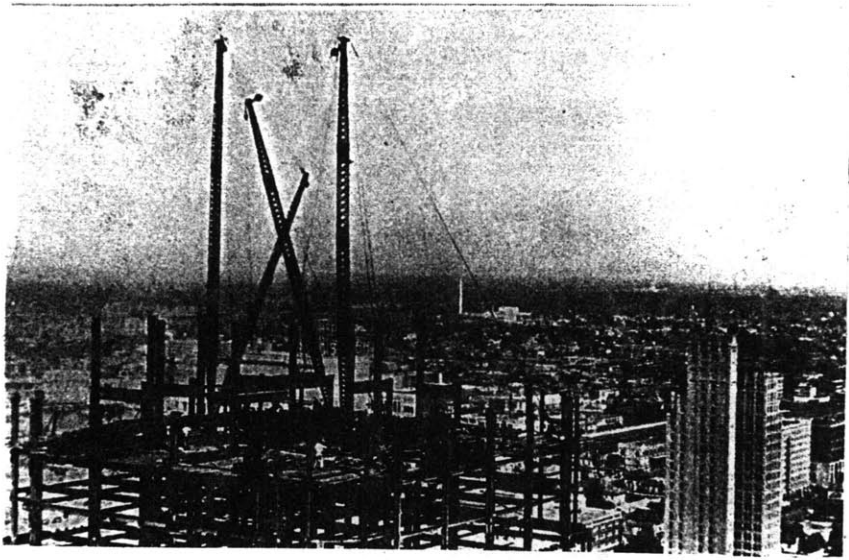
5.62
Highrise construction in Dallas, Texas, ca. 1929, from H.I. Brock, "Building to High Heaven," World's Work, 58:2 (February 1929): p. 71.
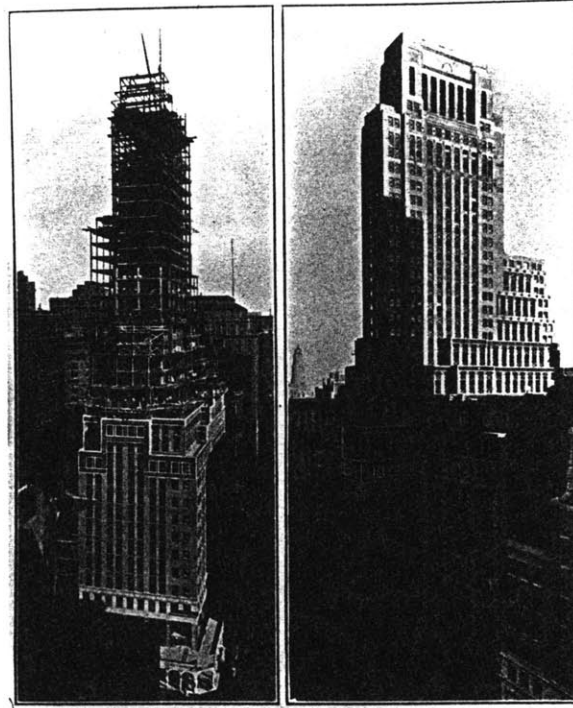
FIG. 30—ERECTING THE FRED F. FRENCH BUILDING ON FIFTH
AVENUE, NEW YORK CITY

The building takes beautiful form through simply expanding within its zoning
envelope

5.63

View of Fred French Building, New
York City, NY, ca. 1927, building
shown under construction from E.A.
Park, New Backgrounds for a New
Age (New York, 1927).

5.64

Rendering by Hugh Ferriss exhibited
at the Titan City Exposition," John
Wanamaker Store, New York City,
1925 ("The Titan City Exposition,"
AR 61 (January 1926): pp. 92-4.
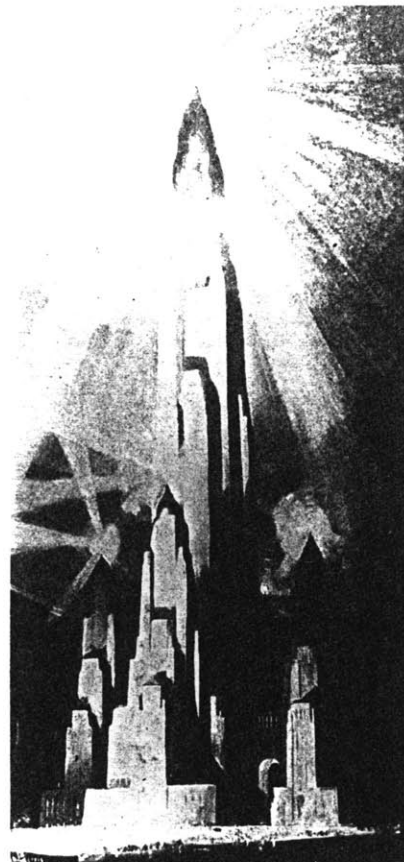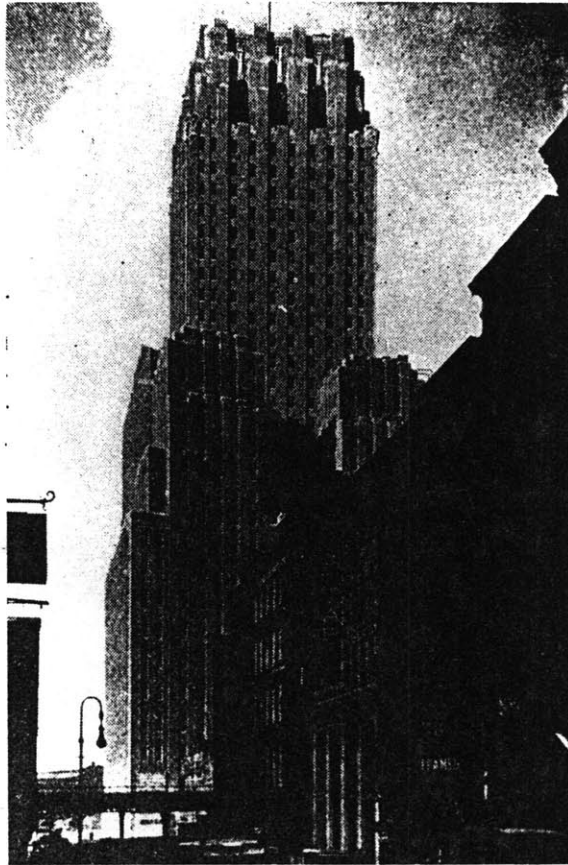
5.65
Barclay Vesey Building, New York,
NY, Voorhees, Gmelin and Smith,
Ralph Walker, designer, 1923-6,
photo by Sigurd Fischer from
George Edgell, The American
Architecture of Today (New York,
1928), p. 359.
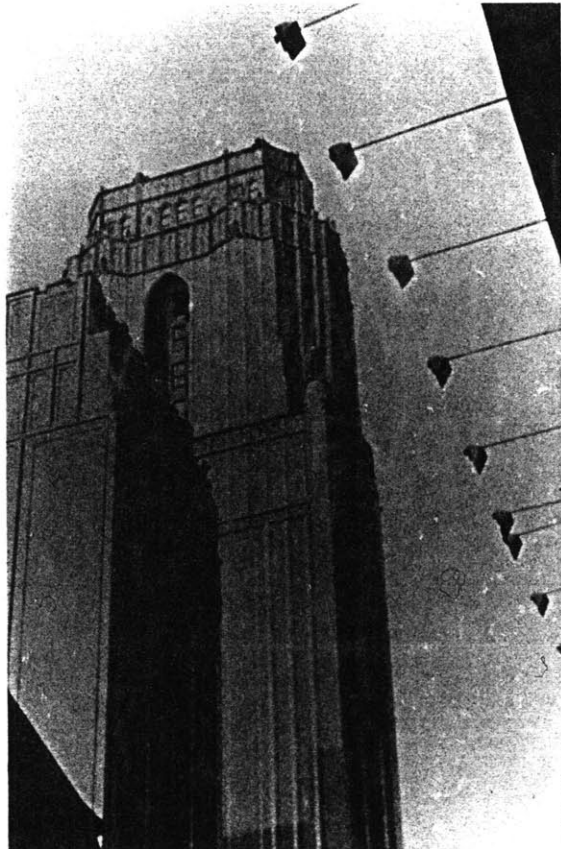
5.66
Bush Terminal Building, New York,
NY, Harvey Wiley Corbett, 1916-17,
photo by Ralph Steiner from Paul
Frankl, New Dimensions: The
Decorative Arts of today in Words
and Pictures (New York, 1928).
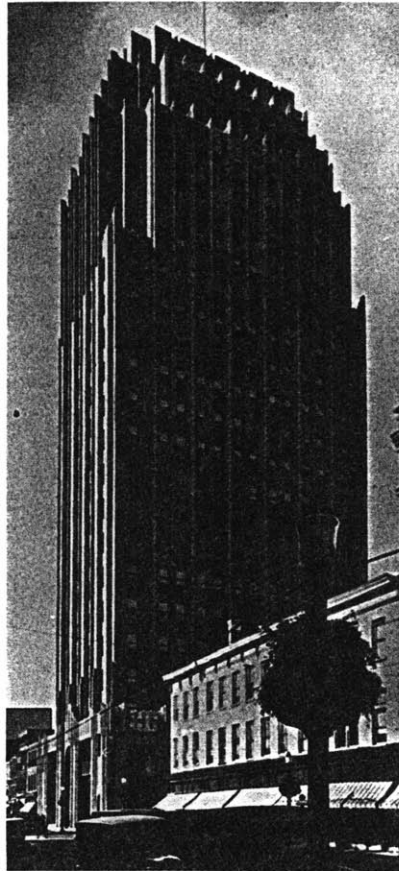
5.67
Pennsylvania Power and Light
Company, Allentown, PA, Helmle
and Corbett, 1927 (AF 52 (1930): pp.
835-6).

5.68
Panhellenic Tower, New York, NY,
Hood and Howells, 1929 (John
Mead Howells, "Vertical or
Horizontal Design," AF 52 (1930): p.
282).

5.69
Office Building, Morgan, Walls and
Clements, ca. 1929 (Sheldon Cheney,
New World Architecture (New York
1930), p.153).
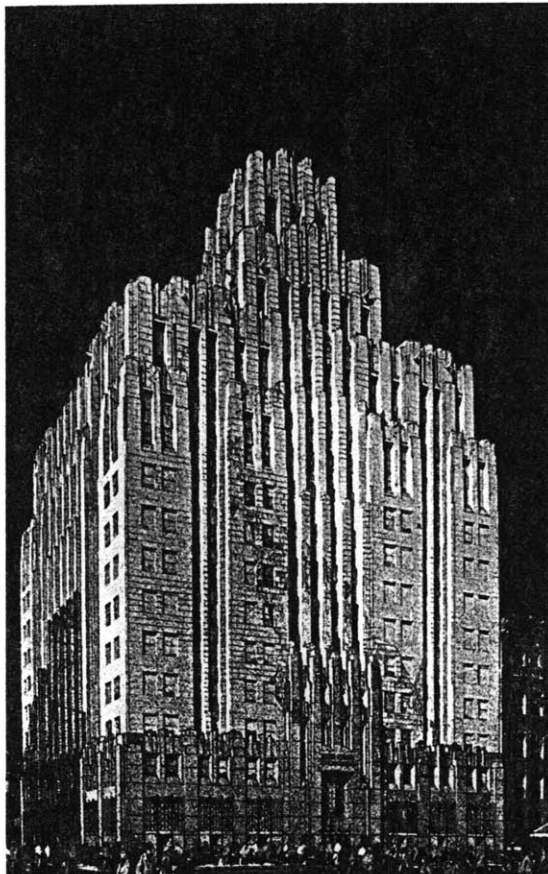
5.70
Harold Furguson Building, Los
Angeles, CA, Walker and Eisen, ca.
1929 (AF 52 (1930): p. 811)

SINBAD, FROM THE ROOF OF THE MEGOPOLIS, VIEWS THE CITY OF FROZEN FOUNTAINS
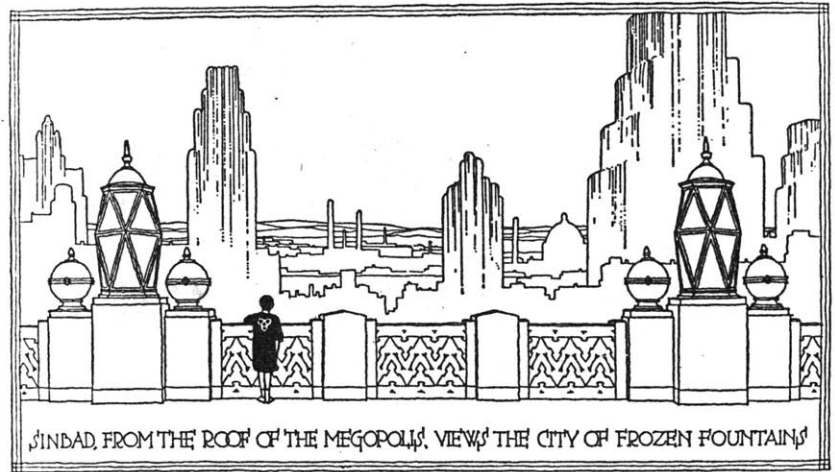
II

THE FROZEN FOUNTAIN

5.71

"The City of the Frozen Fountains," by Claude Bragdon from Bragdon, The Frozen Fountain (New York, 1932).

5.72

Chrysler Building, New York, NY, William Van Alen, 1929 ("The Chrysler Building," AF 53 (October 1930): pp. 403-6, 411-41).
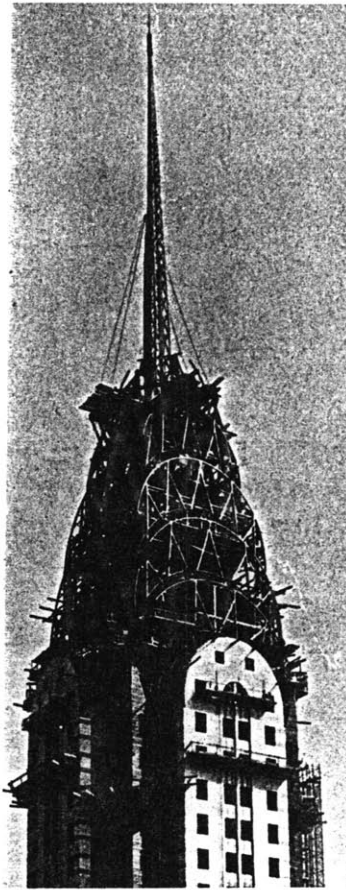
5.73a

Chrysler Building, view showing needle emerging from tower (W. Van Alen, "The Structure and Metal Work of the Chrysler Building," AF 53 (October 1930) pp. 494-5).
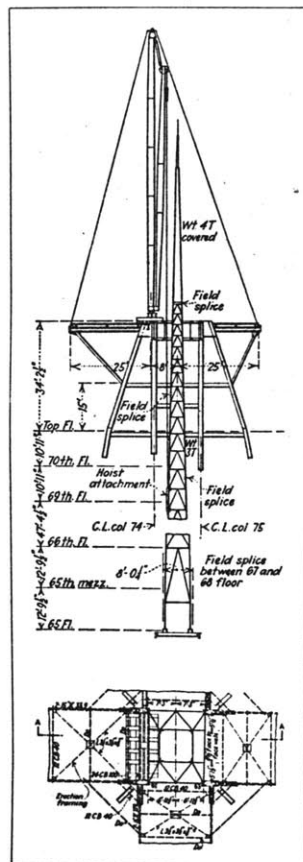
5.73b

Chrysler Building, section showing needle assembled in building (W. Van Alen, "The Structure and Metal Work of the Chrysler Building," AF 53 (October 1930) pp. 494-5).
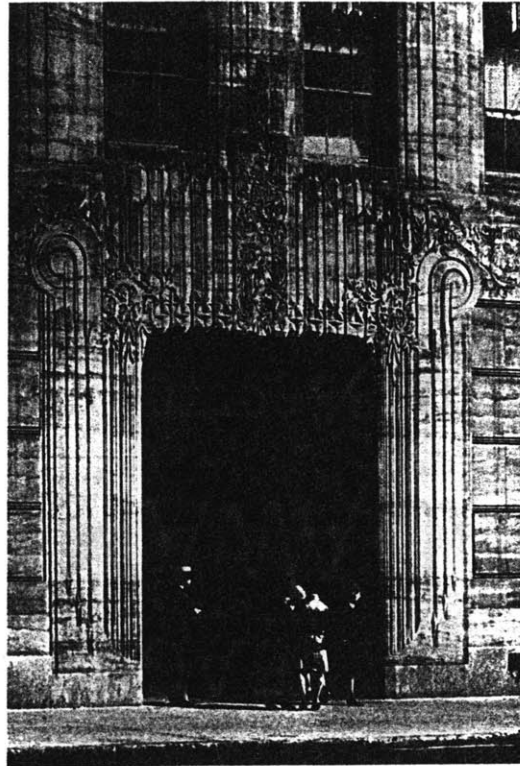
Sigurd Fischer   MAIN ENTRANCE

VOORHEES, GMELIN AND WALKER,
ARCHITECTS

5.74

New Jersey Telephone Building,
Newark, NJ, Voorhees, Gmelin and
Walker, ca. 1927, view of entry
showing motif of fountain (AF 52
(1930) pp. 667-87)

5.75

Irving Trust Building, New York
City, NY, Voorhees, Gmelin and
Walker, 1929-32, plan (Ralph
Walker, Ralph Walker, Architect
(New York, 1957)).

NEW STREET

BROADWAY

WALL STREET

597
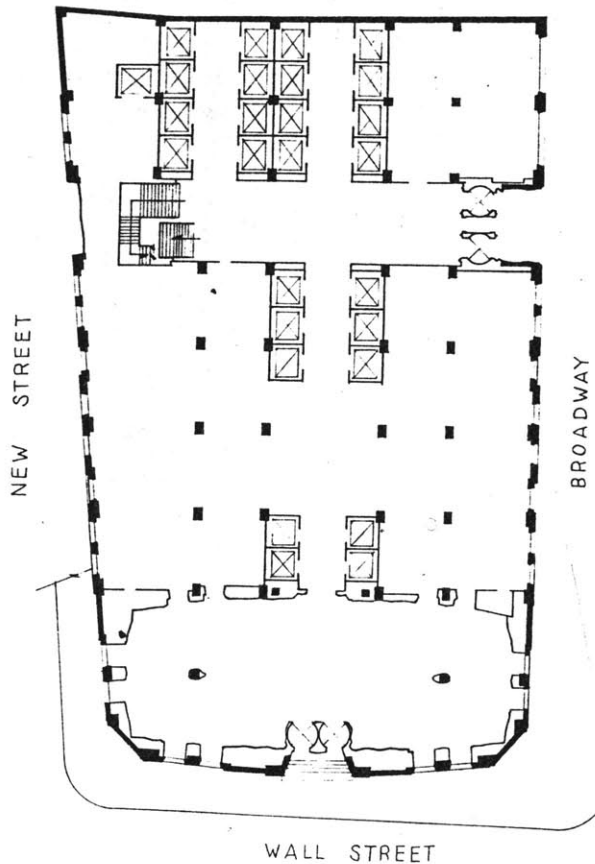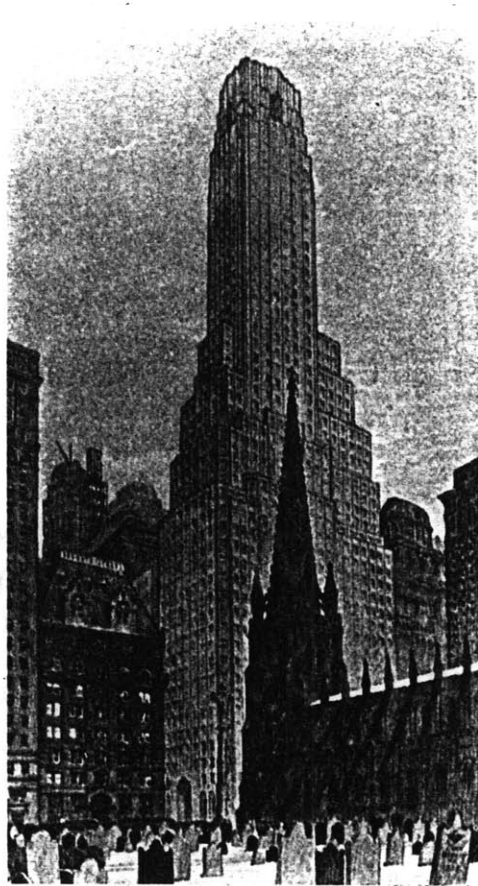
5.76
Irving Trust Building, rendering
(Ralph Walker, Ralph Walker,
Architect (New York, 1957)).
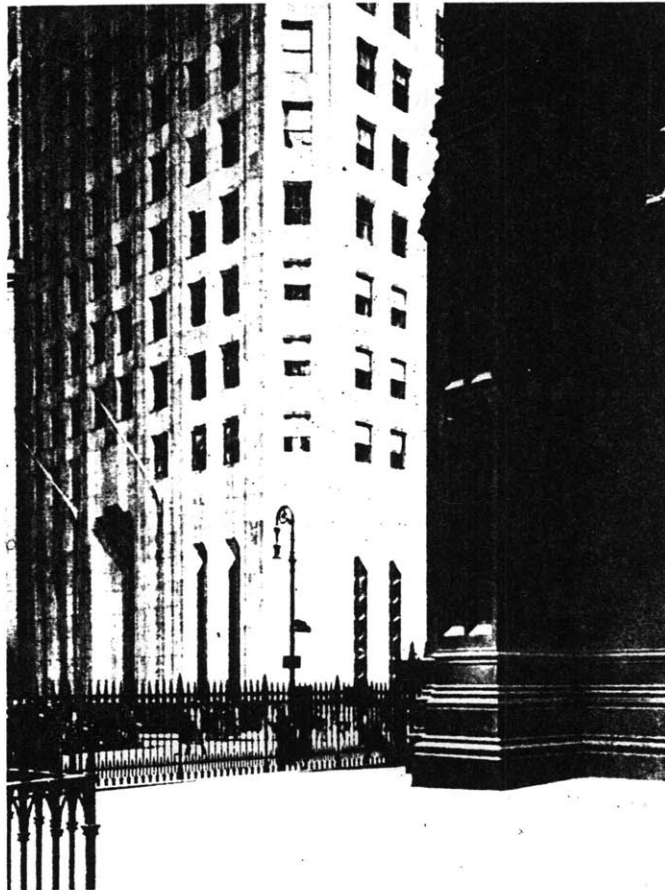
5.77
Irving Trust Building (Ralph
Walker, Ralph Walker, Architect
(New York, 1957)).

The Panhellenic Tower: a skyscraper apartment
building in New York. John Mead Howells,
architect.

5.78
"Home," the Panhellenic Tower,
New York, NY, Hood and Howells,
1929, from Sheldon Cheney, <u>New
World Architecture</u> (New York
1930), p. 279

5.79
"Home," interior view of apartment
by Ely Jacques Kahn from Sheldon
Cheney, <u>New World Architecture</u>
(New York 1930), p. 283.

HOME   2
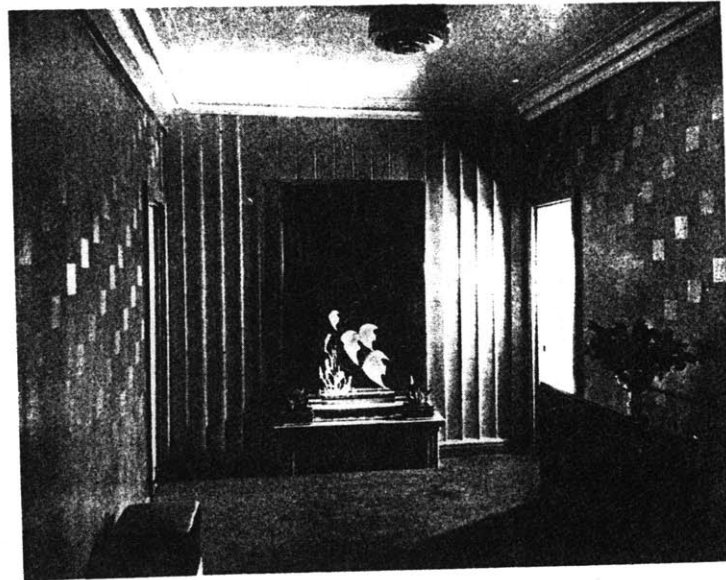
Hallway in apartment of Mrs. Alfred L. Rose, New York. Ely Jacques Kahn, architect. (Photo
Samuel H. Gottscho)

5.80
"This Increasing Vogue for Terraces," advertisement for 730 Park Avenue from NYT, 12 May 1929, sec. 11.

5.81
"Live in a Home of Art and Culture," advertisement for Master Building from NYT, 12 May 1929, sec. 11.
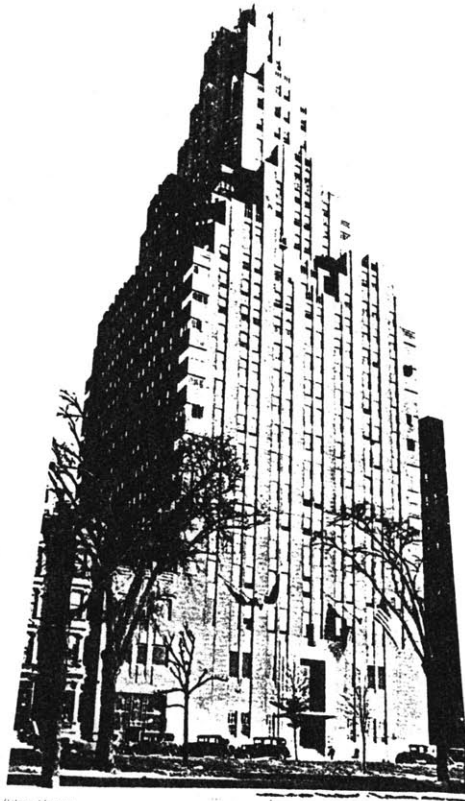
5.82
Roerich Museum and Master
Building, New York, NY, Helmle,
Corbett and Harrison, 1928-37 (AF
53 (September 1930): p. 295).

5.83
"The Centre of Convenience,"
advertisement for 440 Park Avenue
from NYT, 27 October 1927, p. 52.

THE CENTRE of
CONVENIENCE

Park Avenue at 56th Street,
the platinum hub of Society —
the location of New York's
smartest apartment hotel,
The Drake. Suites, 2 rooms
and larger, unfurnished and
furnished, completely ap-
pointed and serviced, from
$2600. A few suites for tran-
sients—
Alfred C. Ray, Manager.
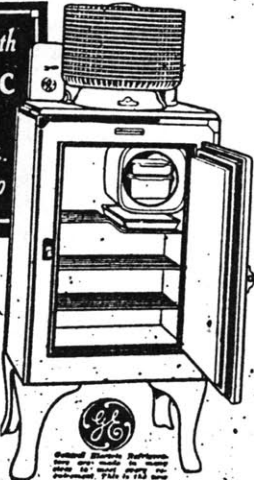
The
DRAKE
440. PARK AVE
AT 56th ST.

5.84
"Your Vacant Apartments will not
be idle long," advertisement for
General Electric Refrigerators, CT,
12 May 1928.

5.85
Rex Cole Building, Bayridge, NY,
Raymond Hood, 1931 (Walter
Kilham, Raymond Hood, Architect:
Form Through Function in the
American Skyscraper (New York,
1973), p. 65).
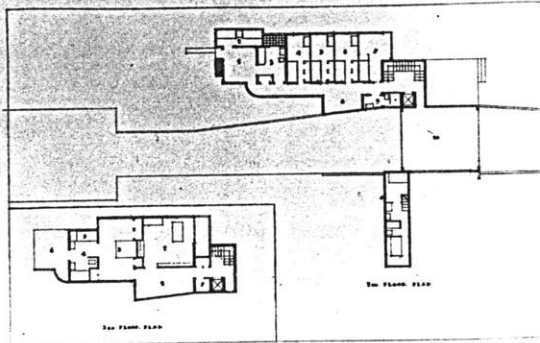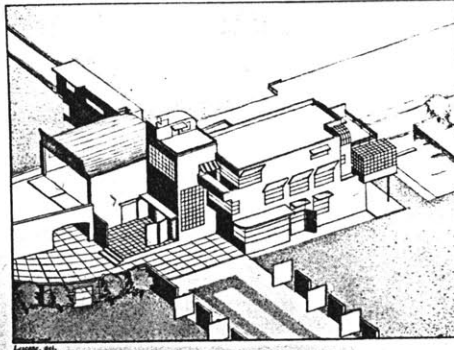
SKETCH AND FLOOR PLANS
AN AMERICAN HOUSE IN 1938
LESCAZE, ARCHITECT

5.86
"The Future American Country House," by William Lescaze, 1928, project, lower floor plan and perspective (AR 64 (September 1928): pp. 417-20).

5.87
"The Future American Country House," second floor plan and perspective (AR 64 (September 1928): pp. 417-20).
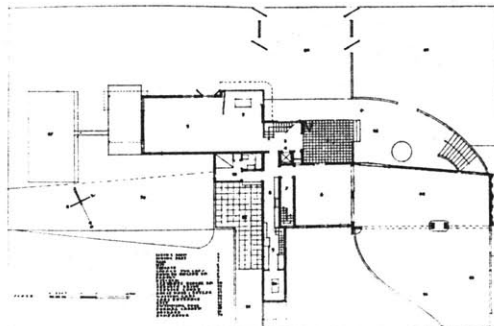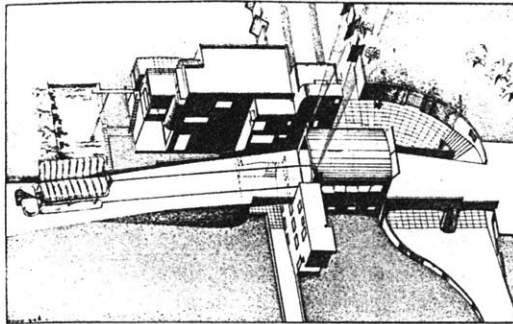
DRAWINGS SHOWING HOUSE AND GARDEN LAYOUT
AN AMERICAN HOUSE IN 1938
LESCAZE, ARCHITECT
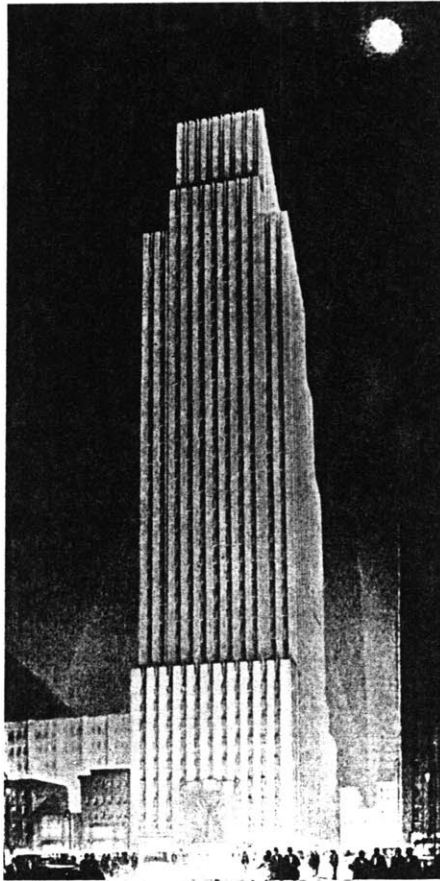
5.88
Daily News Building, New York,
NY, Raymond Hood, drawing by
Hugh Ferriss (AF 52 (1930): p. 791).
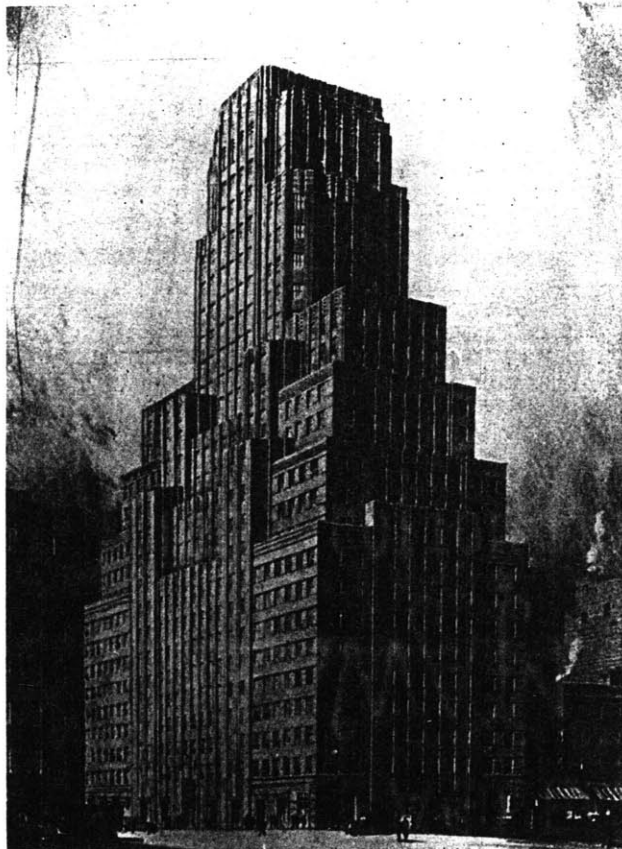
5.89
Brooklyn Central Office, New York
Telephone Company, Voorhees,
Gmelin and Walker, ca. 1928 (AF 54
(1931): p. 407).

5.90
Telephone Administration Building,
Cleveland, OH, Hubbell and Benes,
ca. 1928 (AF 54 (1931): p. 407).

5.91
Southwestern Bell Telephone, St.
Louis, MO, Mauran, Russell and
Crowell, ca. 1927 (Theodora Kimball
and Henry Hubbard, Our Cities
Today and Tomorrow: A Survey of
Planning and Zoning Progress in the
United States (Cambridge, MA,
1929)
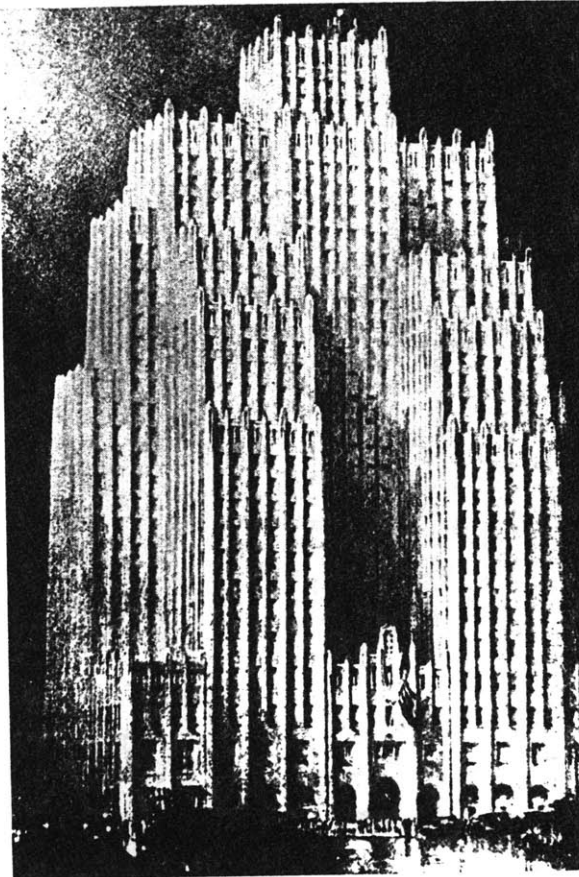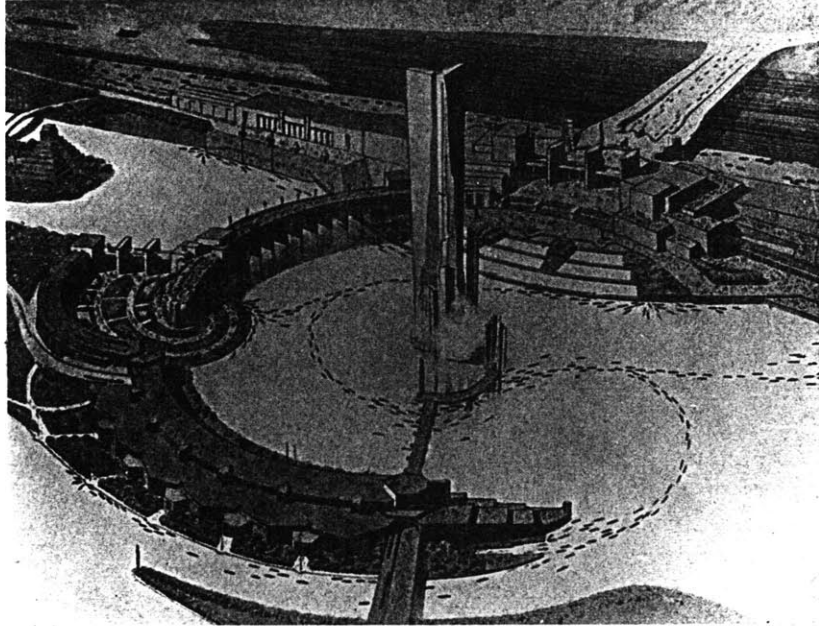
5.92
Proposed fountain for the Century
of Progress International Exposition,
Chicago, IL, Ralph Walker, ca. 1929
(Thomas Adams, The Building of
the City (New York, 1931), p. 121).
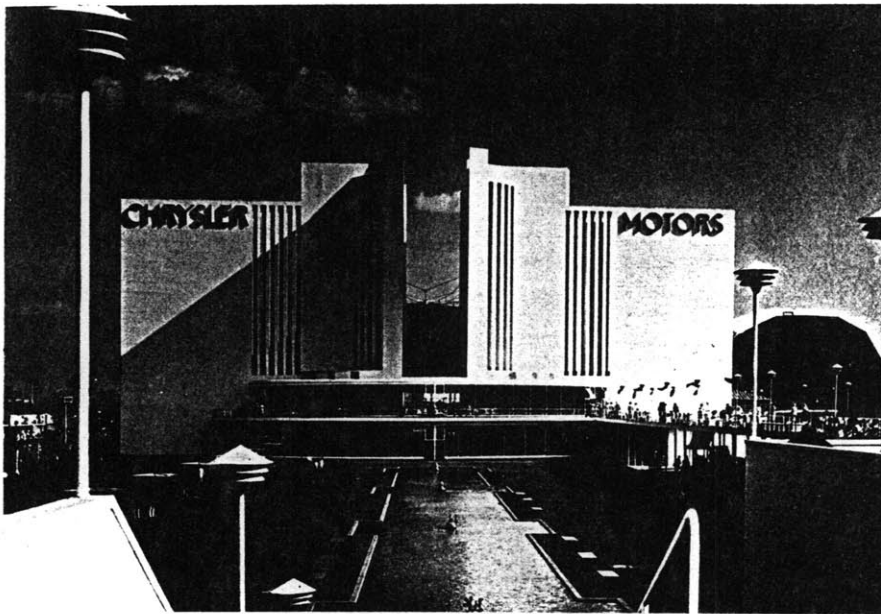
5.93
Chrysler Pavilion, CPIE, Chicago,
IL, Holabird and Root, 1933 (AF 59
(July 1933): p. 43; (December 1933):
p.455).
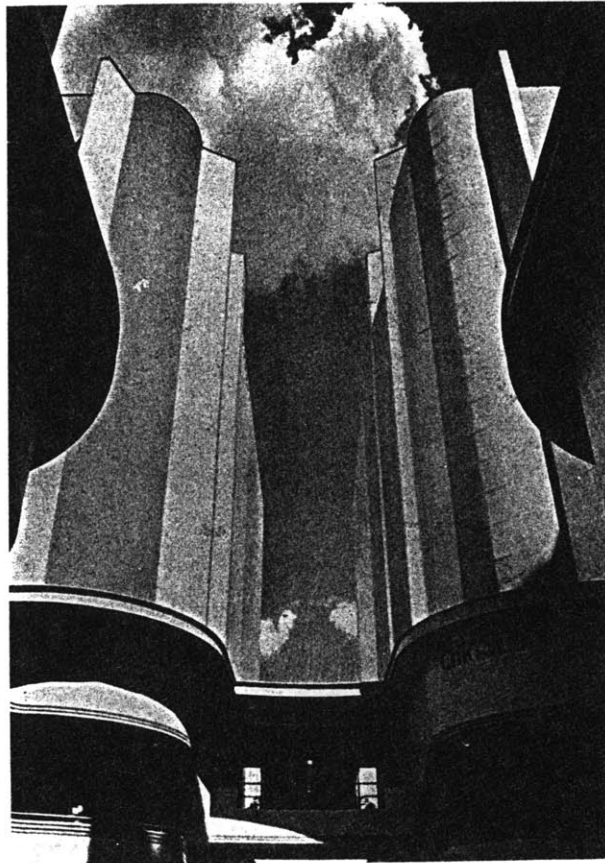
5.94
Chrysler Pavilion (AF 59 (July 1933):
p. 43; (December 1933): p.455).

5.95
General Motors Pavilion, CPIE,
Chicago, IL, Albert Kahn, 1933 (AF
59 (July 1933): p.42).
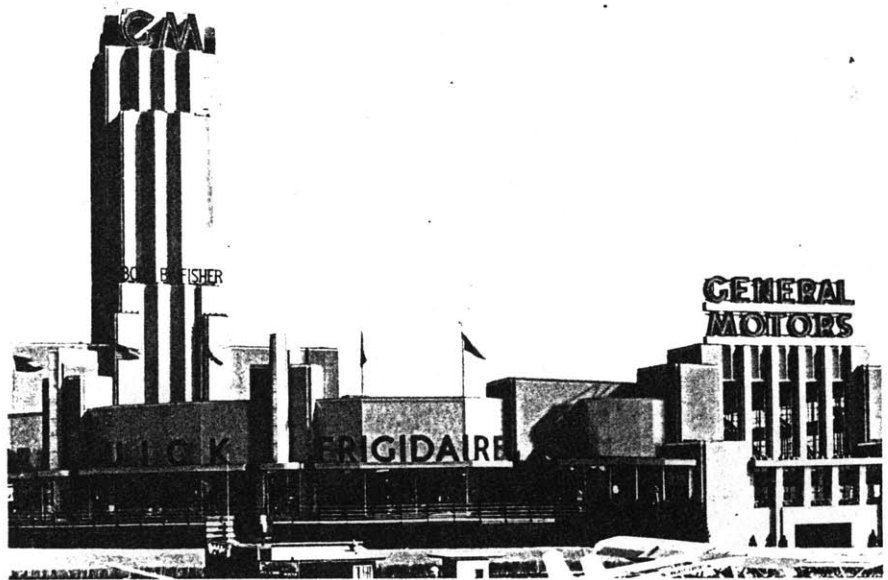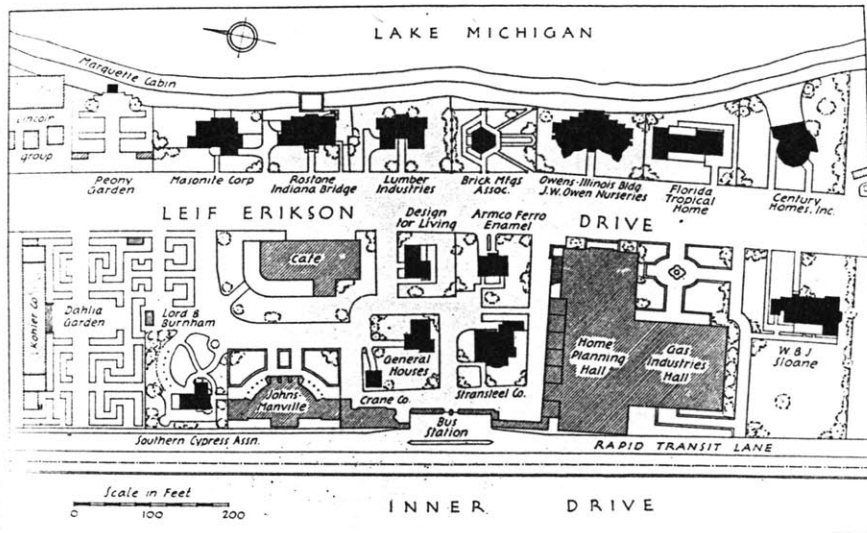
Map showing the locations of the Modern Houses
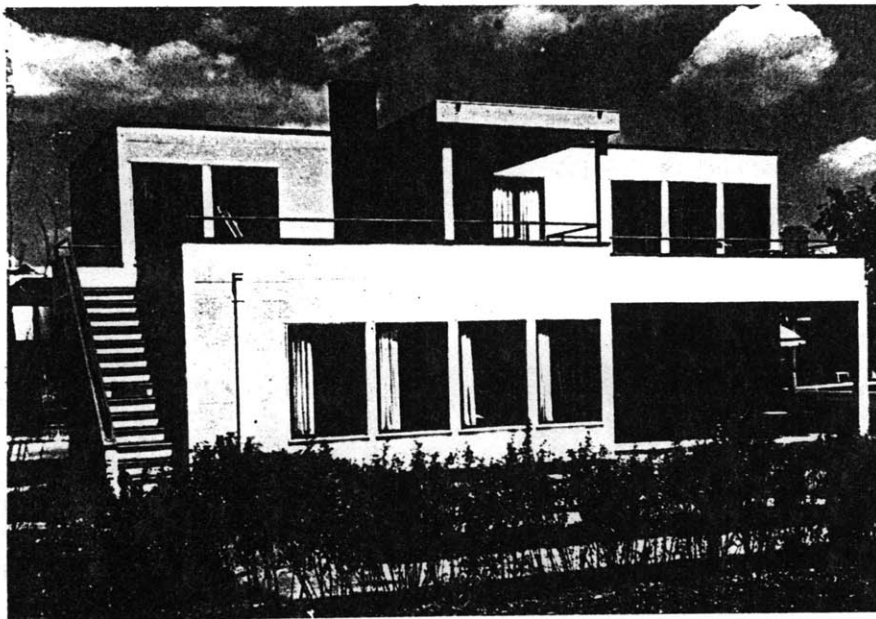
5.96
Map of "Modern Houses Exhibit,"
CPIE (AF 59 (July 1933)).

5.97
"Design for Living," CPIE, Chicago,
John Moore, 1933 (AF 59 (July
1933): p. 53).
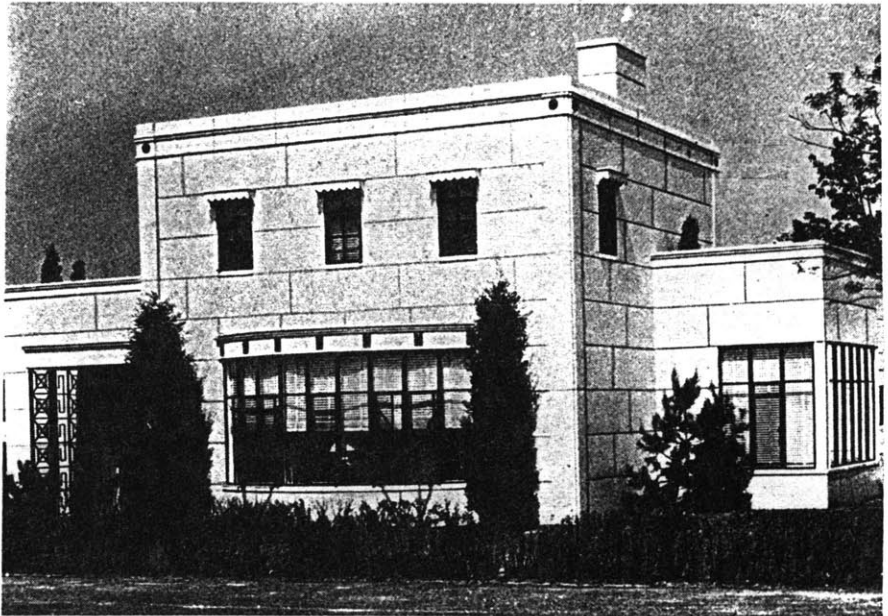
5.98
"House of Tomorrow," CPIE,
Chicago, George Fred Keck, 1933
(AF 59 (July 1933): p. 61).

5.99
"Stransteel House," CPIE, Chicago,
Odell and Rowland with Dwight
Baum, 1933 (AF 59 (July 1933): p.
55).
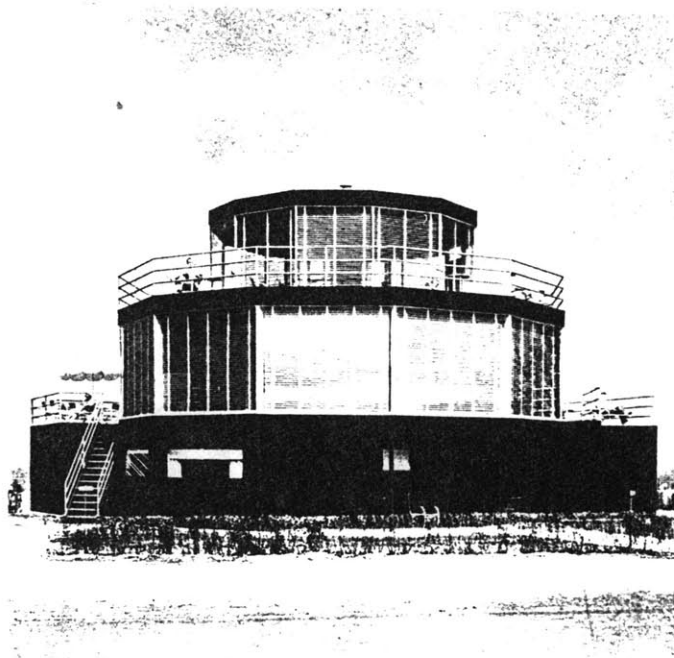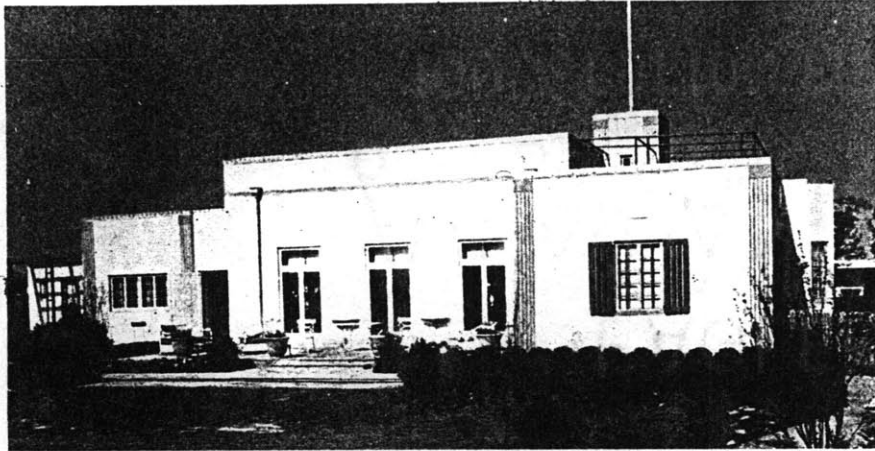
5.100
"House of Today," CPIE, Chicago,
Corbett, Harrison and MacMurray,
1933 (AF 59 (July 1933): p. 62).
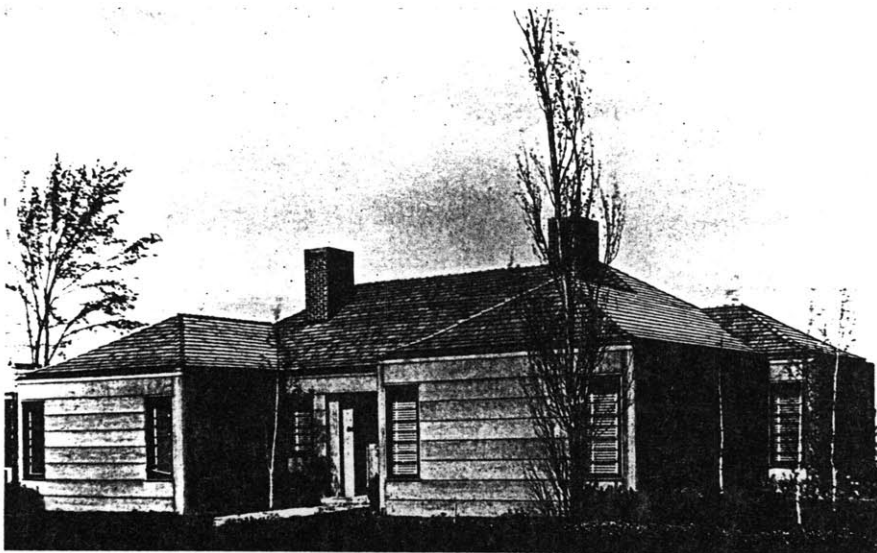
5.101
"Lumber Industries House," CPIE,
Chicago, Ernest Grunsfeld, 1933 (AF
59 (July 1933): p. 59).
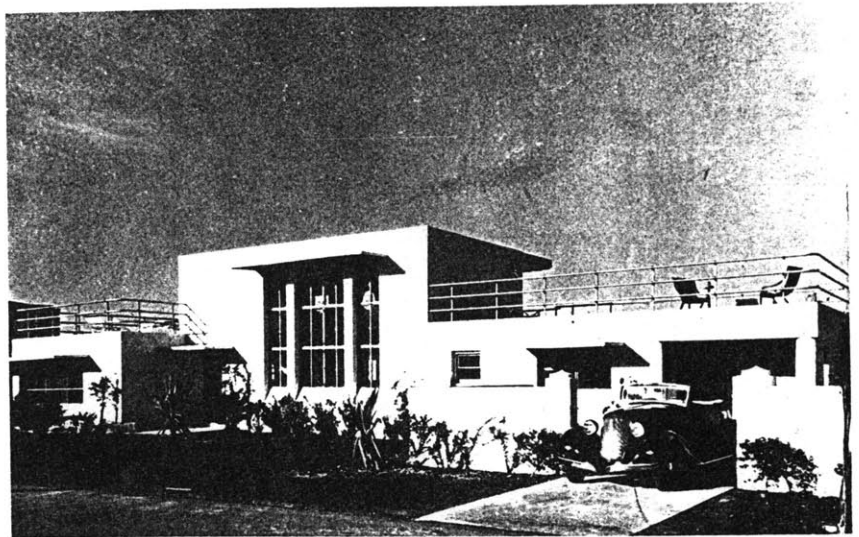
5.102
"Florida House," CPIE, Chicago,
Robert Law Weed with Percival
Goodman, 1933 (AF 59 (July 1933):
p. 58).

5.103
"Common Brick House," CPIE,
Chicago, Andrew Rebori, 1933 (AF
59 (July 1933): p. 60).

611
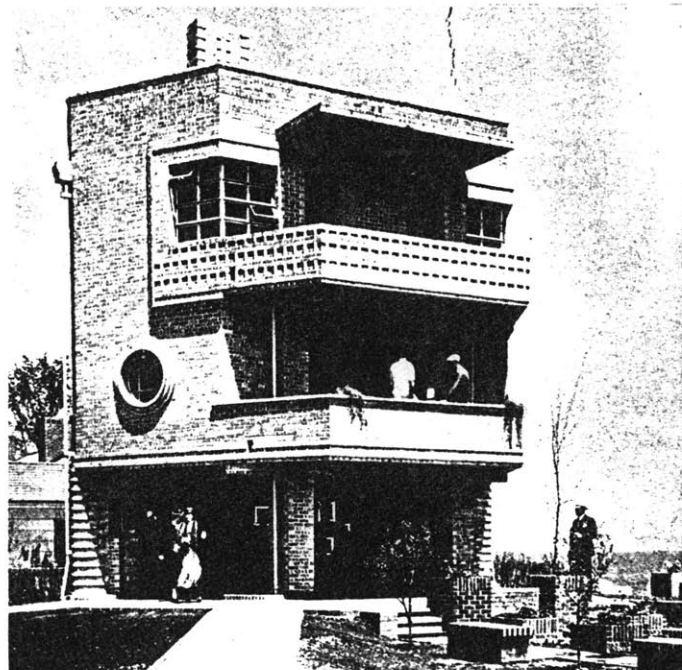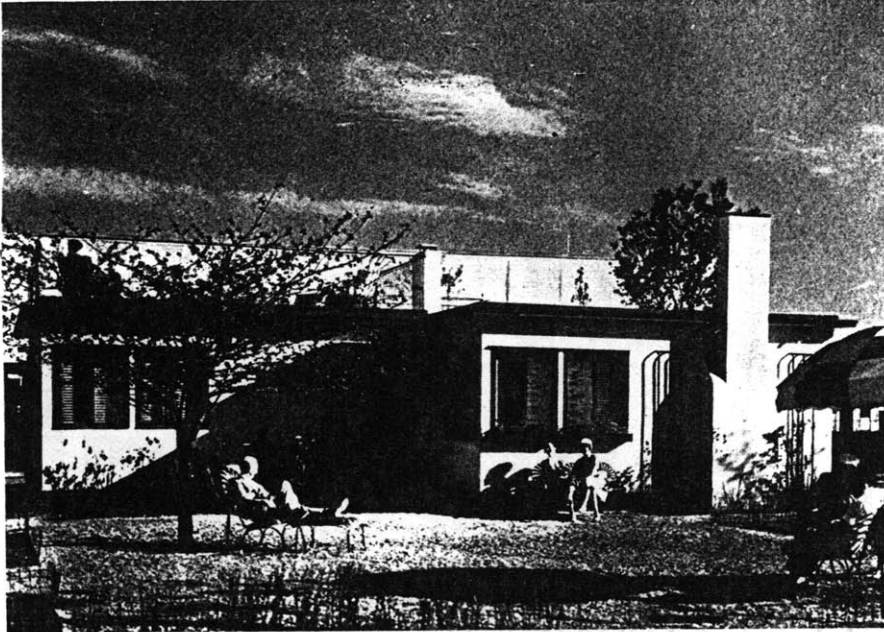
5.104
"General Homes," CPIE, Chicago,
Howard Fischer, 1933 (AF 59 (July
1933): p. 52).

5.105
Home Planning Hall, CPIE, Chicago,
IL, Ely Jacques Kahn, 1933 (AF 59
(July 1933): p. 41).

EVERY HOUSE NEEDS **Westinghouse**

5.106
Advertising distributed by
Westinghouse Appliances at CPIE,
1933 (UIC CPIE Collections)

5.107
Advertising distributed by Electrolux
Vacuum Cleaner Company at CPIE,
1933 (UIC CPIE Collections).
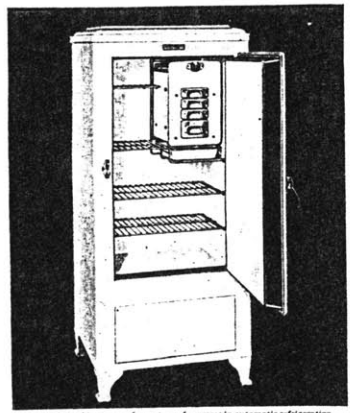
NEW *Air-Cooled* ELECTROLUX
The GAS Refrigerator

Automatic Refrigeration

YESTERDAY . . . a scientist's dream
TODAY . . . the mark of a modern home

AWAY back in prehistoric times, man discovered how to make heat. But not until less than two hundred years ago did he learn how to make "cold".

Even after the first steps were achieved, automatic refrigeration for the home continued to be only a scientist's dream. And most young people can easily remember when automatic refrigerators first appeared in their communities.

However, once automatic refrigeration passed from the experimental to the practical stage, its economic advantages were so obvious that a new industry came into being almost overnight.

Modern economy—saving money
by spending money

People were quick to realize that this new method of protecting and preserving foods effects savings which quickly offset the cost of the

5.108a

General Houses Brochure distributed at CPIE, 1933 (UIC CPIE Collections).

5.108b

General Houses Brochure (UIC CPIE Collections).

4542-4