URBAN DESIGN EDUCATION

IN SELECTED SCHOOLS OF THE UNITED STATES

by

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(1956)
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(1958)

SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE
DEGREE OF MASTER OF
CITY PLANNING

at the

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

June, 1965

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May 21, 1965

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ABSTRACT

Title of the Thesis: URBAN DESIGN EDUCATION IN SELECTED SCHOOLS OF
                       THE UNITED STATES.

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SUBMITTED TO THE DEPARTMENT OF CITY AND REGIONAL PLANNING ON MAY 21,
1965 IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF CITY PLANNING.

The major objectives of this study were:
    1. To become acquainted with the various methods and opportunities
that exist today in three selected schools for training urban designers.
    2. To determine how the faculties of the three schools define the
term "urban design" - its scope, objectives, and role with respect to
the other design professions.

The principle findings were:
    Although urban design education is being taught as an inter-
discipline subject, it is more closely oriented toward architecture than
to city planning or landscape architecture. Urban design probably is
not a separate profession; it is either a field of interaction between
the three design professions (a gap filler) or is architecture. The
hypothesis concerning various attitude polarities having to do with the
shaping of the physical form of the urban environment which were
believed to have direct influence upon academic program objectives and
curricula was verified, however, the definitions of urban design - its
scope, objectives, and role with respect to the other design profess-
ions - which were held by the various faculties also influenced each
school's program. No hierarchical arrangement of attitudes and defini-
tions was evident; each is interacting with the other.
    The urban designer is primarily concerned with visual form. His
role includes interpreting or integrating (or both) visual form matters
with planning decisions; his skills embrace those expected of the three
design professions and the measure of his success will be his
competence in all rather than one. As such, he exists as an ideal
type. This belief reinforces his being evaluated on his performance in
one or the other of the traditional design professions and at a lesser
scope than the total environment.
    Regardless of urban design's definitions, the implication is that
fragmentation still prevails; old theories, techniques, and methods are
being perpetuated. The result is that urban design as a potentially
great and unique art - and possibly a new profession - is being
thwarted. The failure to produce worthy contemporary urban design may
lie in the fact that traditional methods and techniques of architecture
are being used to cover current problems peculiar to this area of
concentration.

Thesis Supervisor. . . . .
                       DONALD S. APPLEYARD, Assistant Professor
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ACKNOWLEDGMENTS

The author wishes gratefully to acknowledge the contribution of the following groups and individuals who unhesitatingly provided information, suggestions, guidance and financial assistance which was an essential part of the accomplishment of this study:

TABLE OF CONTENTS

(TABLE OF CONTENTS, continued)

Section

Section I

INTRODUCTION, OBJECTIVES AND FINDINGS

Section I

INTRODUCTION, OBJECTIVES AND FINDINGS

Purpose

The purpose of this study was to provide the author, as well as

other interested individuals or groups, with an understanding of and to

become acquainted with the various methods and opportunities that exist

today in various schools of the United States for training Urban

Designers.

In addition to being concerned with the various approaches toward

training the Urban Designer, the author was also interested in determin-

ing how the various schools defined (1) the term "Urban Design", (2)

the objectives and scope of Urban Design, (3) the role of the Urban

Designer, and (4) the relationship between Urban Design and the other

professional fields which have direct influence upon consciously shap-

ing the urban environment.

Scope

The scope of this study is severely limited. This is due to the

fact that (1) only a limited amount of time and money was available to

probe into this subject, thus only three schools were selected for the

study; (2) it was possible to spend only two or three days at each of

the schools due to the time and cost constraints; (3) the visit to each

of the schools did not always coincide with the most opportune time to

view the students in action (jury, discussion of completed projects,

etc.); (4) the difficulty of arranging an adequate amount of time with each professor and student to fully explore the subject (the author tended to concentrate on the faculty member in charge of the program, leaving the others to fill in whatever time remained); and (5) the limited ability of the author to ask questions, write and listen almost simultaneously (a tape recorder was considered but ruled out on the assumption that professors may not wish to be quoted. Indeed, the author was asked not to quote certain facts which were relevant to the study).

To broaden the scope of this study, two alternatives are suggested dependent upon the constraints of time and money.

1. An additional amount of money and time equal to that already spent:

   a). Visit the selected schools at least twice; at the beginning and the end of the term or year and at the appropriate time with respect to problem introduction and jury.

   b). Interview the same students and faculty members in order to verify statements or answer additional questions.

   c). Interview faculty members in other departments who may be working with students in the urban design program or may have relevance to the field in general.

   d). Enlist the support of a colleague and part-time typist.

2. A generous budget of time and money:

   a). Extend the study to include all academic institutions in the United States as well as foreign countries who have urban design coursework and degree programs.

   b). Double the amount of visits to schools so as to arrange mid-term visits.

2

c). Interview extensively other faculty members in the various

   departments who have relevance.

d). Search out and interview graduates of the various programs.

e). Enlist the services of a full-time secretary and the active

   support and help of colleagues at various institutions.

Timeliness of the Study

Much has been said about the rapidly developing urban environment
and the technological advances that have been accomplished to date in
this century. Man now has the ability to rapidly alter, manipulate and
control many, if not all, of the perceptual elements which make up the
urban environment. Yet man seems unsure as to what he wants, visually,
in the urban environment or how to best order (design) the various
elements to achieve his needs and desires. Indeed, though he may state
various visual objectives as an hypothesis, he is not at all certain
how to accurately measure their attainment with any regularity or
consensus.

Various professions in the past which have been concerned with the
shaping of the physical environment have tended to deal with its design
on a fragmented basis, being content with only one or two aspects of
the problem or working comprehensively on only small parts of the urban
environment.

Today there appears to be, if the professional journals can be
taken as a reflection of the times, a movement toward a comprehensive
approach to the shaping of the urban environment physically, visually,
socially and economically at various scales. The professions and their
related academic programs are taking up the call which results in old

3

curriculums being modified, extended or reoriented and new ones created to meet the challenge.

"Urban Design" seems to be the name selected for these academic programs which have been formulated either to be an integral part of one of the various traditional professions or fill the gap that exists between them. It appears that the programs have been charged with the responsibility of both leading and following the various professions in training men and women in the art and science of dealing with the physical character of the urban environment at a varying scope and scale while it is being designed comprehensively.

Today, many institutions of higher learning are probably giving some urban design coursework. Only a few, it is believed, have programs which terminate with an explicit degree in Urban Design.[1] Nevertheless, the various professional associations urgently encourage that their respective academic programs include this subject and are prevailing upon the institutions of higher learning to insert urban design in their course offerings. One can prognosticate with some certainty, therefore, that more coursework and degree programs will be forthcoming in the future.

When considered in this context, the author believes that this study, however restricted in scope, is indeed timely.

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[1]Harvard University, University of Pennsylvania, Cornell University, and Washington University (St. Louis), University of Virginia.

Procedure

To achieve the previously stated purpose of this study, the procedure consisted of:

1. Selecting and interviewing three schools which the author believed, upon reading the school's catalog, represented a wide range of thinking concerning urban design education in the United States. A constraint upon the selection of schools was their distance from Cambridge since the author had only a limited amount of time and funds to devote to traveling.

2. Contacting each of the schools selected formally, expressing my intent. Stress was made on the point that this was a descriptive rather than an evaluative study.

3. Spending two or three days at each of the three schools informally interviewing the various students and faculty members who were involved in the urban design program. The objectives for the informal interview questions were:

   a) To determine what attitudes the faculty of the selected schools have toward the three-dimensional aspects of the urban environment and its design.

   b) To determine how the term "Urban Design" is defined by the faculty of the selected schools.

   c) To determine what objectives the faculty of these selected schools are seeking to attain in their particular programs.

   d) To determine what curriculum is being suggested by the faculty of these selected schools to achieve their objectives concerning the training of urban designers.

   e) To determine, if possible, what criterion is being applied by

5

the faculty to judge the success of their programs in achieving their stated objectives.

f) To determine what positions the graduates of these selected schools fill upon graduation.

Summary of Findings

Various methods and opportunities do prevail in the selected schools for training urban designers. Although possessing similarities in approach, methods, and techniques, the three programs, when examined together, are different. These differences exist due to (1) various attitudes concerning the conscious shaping (designing) of the physical character of the urban environment which lie between polarities, (2) the definition and interpretation of urban design - its scope, objectives, and role with respect to the other design professions of architecture, city planning, and landscape architecture.

I. Attitudes. It was hypothesized that the following capsulized list of diametrically opposed attitudes concerning the conscious shaping of the urban environment, representing some of the attitudes encountered by the author in his coursework at M.I.T., directly influenced the basic principles upon which programs were formulated to train urban designers. While this hypothesis was verified, nevertheless, the definition and interpretation of urban design (either a separate field, an integral part of one of the traditional design fields, or a culmination of all fields) - its scope (encompassing either parts of or the total urban environment), its objectives (primarily concerned with three-dimensional form matters), and its role (either interpreting or integrating visual form matters with planning decisions) by the faculties

6

of the selected schools were also important. Each of these attitudes
or beliefs are interdependent as no hierarchical arrangement was
evident. The list of hypothesized attitude polarities, capsulized,
included:

> Existing New Form: Delicate and sensitive adjustment versus
> complete change in the form of the urban environment to
> accommodate today's urban growth and opportunities.

> Rural/Urban: Rural versus urban environment in the city to
> accommodate societal values.

> Order/Richness: The urban environment should be ordered and
> controlled versus contrasted, spontaneous, haphazardly mixed
> development.

> Function/Form: Form follows function and vice versa in the
> design of the urban environment.

> Scale: The human scale versus a variety of scales should be
> utilized in the design of the physical character of the urban
> environment.

> Scope: Aesthetics is applicable only to parts versus the
> total form of the urban environment.

II. Scope and Objectives: There is a consensus among the three
schools that urban design is concerned with the shaping of the physical
rather than the social or economic character of the urban environment;
there is less agreement as to the scope of urban design.

Harvard University: In defining the scope and objectives,
Harvard's faculty suggests that urban design is a field concerned with
the willful interpretation of planning decisions in three-dimensional
terms. As such, it is a field of interaction (gap filler) between the
three design professions which has professional status. The degree
awarded, Master of Urban Design in either Architecture, Landscape Archi-
tecture of City Planning (determined by the candidate's prior speciali-
zation) upon completion of the one-year program substantiates this

7

belief. Urban design is charged with the responsibility of predicting
and controlling urban growth by effectuating an imageable form which
can grow and change over time - yet will accommodate technological
advances and human need, and will remain visually consistent and
aesthetically pleasing to the observer.

This definition of urban design's scope and objectives encompasses
attitudes which fall along a continuum between all of the hypothesized
attitude polarities. This definition advocates (1) a concern for a new
rather than sensitive adjustment to the historical form of the urban
environment - Existing/New Form; (2) an ordered rather than a spontane-
ous and haphazard variety of development - Order/Richness; (3) a
mixture of form and function so that a pleasing, yet workable, form
will exist over time - Function/Form; (4) a variety of scales for the
design of the urban form are appropriate which maintain a relationship
to the human being - Scale ; and (5) that aesthetics is applicable to
the total form rather than just to its parts. A visit to the school
confirmed the implicit attitude that an urban rather than a rural
atmosphere is desired in the urban environment - Rural/Urban.

New attitudes expressed are that urban design is a field which has
professional status, is interpreting planning decisions in three-
dimensional form, and is concerned with observer perception of the
urban form.

University of Pennsylvania: The faculty assigned to the Civic
Design program (at the moment there is a difference of opinion as to
whether or not the terms "civic design and urban design" are inter-
changeable or that civic design is a lower order of urban design which
is done by anyone) disagree with their counterparts at Harvard that

civic or urban design is a separate profession. Their concern is for total architecture thus civic or urban design not only interprets planning decisions but also integrates planning decisions with visual matters; upon completion of the two-year curricula, therefore, two degrees - Master of Architecture and Master of City Planning - are awarded. Complete change of the urban form and environment is tempered with delicate and sensitive adjustment, and function and form are resolved together.

The practitioner is concerned with conferring a three-dimensional form on the urban environment which is a true expression of the continually changing community. The three key concepts are (1) the state of being of the artifacts, (2) their relationship to each other, and (3) the purpose for which man intends to use them.

In addition to the attitudes previously mentioned, these definitions verify that an urban rather than a rural atmosphere is desirable in the urban environment - Rural/Urban; an ordered environment is preferred - Order/Richness; a variety of scales are necessary for the design of the urban environment - Scale; and aesthetics is applicable to the total form - Scope.

New attitudes revealed are that civic or urban design integrates as well as interprets planning decisions with visual matters and that the field of architecture should be elevated to the highest pinnacle with the other design professions nestled beneath it for support. Nothing is explicitly mentioned concerning observer perception of the three-dimensional forms which are true expressions of the continually changing urban environment.

Cornell University: The urban design faculty at Cornell believes

9

that urban design is interpreting, in architectural terms, developments proposed by city and regional planning; it is an inter-discipline field falling between architecture and city planning - but more closely related to architecture. The degree awarded, Master of Architecture in the field of Urban Design, upon completion of the two-year program bears witness to this belief.

Urban design is concerned with the visual arrangement of buildings so that the environment functions efficiently, a satisfactory aesthetic is attained, and the land is best used to achieve urban beauty. Aesthetics is not applicable to the total form and the scope of urban design falls between, but does not include, the single building project or the total city.

Interestingly, these definitions fall between those of Harvard and the University of Pennsylvania - borrowing something from each. The faculty at Cornell is alone, however, in advocating that aesthetics is not applicable to the total form of the city or that urban design does not embrace the total city in scope. A visit to the School confirmed the implicit concern for form rather than function and a scale which tends to exclude the human being in favor of achieving a composition of buildings and spaces related harmoniously with each other in various axial relationships. Cornell's faculty does agree with the other faculties that an ordered urban environment having an urban rather than a rural atmosphere is desired.

III. Role. The role of the urban designer varies accordingly with the definitions attached to its scope and objectives by the various faculties. The faculty of Harvard and Cornell see the role of the urban designer as being one of interpreting planning decisions while the

faculty at the University of Pennsylvania see the urban designer's role as both interpreting and integrating planning decisions with visual matters. The implication is that urban design is accomplished after the fact - thus a dressing up of both good and bad planning decisions (in Harvard's and Cornell's case) whereas integrating planning decisions with visual matters (as in Pennsylvania's case) places urban design in the conceptual as well as the decision-making phases of the planning process.

The attitudes that urban design is either a "gap filler" profession (Harvard) or is a profession closely allied to architecture (Cornell and Pennsylvania) indicate a belief on the part of the various faculties at these schools that the traditional design professions are unable to cope with contemporary visual and physical problems and opportunities of the urban environment, therefore, either a new professional field or a redefinition and extension of the scope and objectives of the traditional design professions is needed.

To fulfill his role, all faculties agree that the urban designer must be a highly talented, creative, and competent three-dimensional designer. In addition the Harvard faculty believes that he must have (1) the combined skills of planning and architecture (2) the skill to make decision-makers aware as to how design can further planning goals, and (3) the ability to work out a framework that interprets planning policies in terms of design which can be effectuated by others (architects, etc.) permitting a reasonable degree of variation.

The faculty at the University of Pennsylvania suggests that the civic designer (1) must, like other physical planners, understand the nature of the system within which he is working, (2) exercises his

11

unique function by first preparing recommendations for changing the artifacts of the city and then tracing the implications of these recommendations in all dimensions from the point of view of his special emphasis in design, and (3) must, therefore, possess the skills of an architect, city planner, and landscape architect.

At Cornell, the urban design faculty suggests that the urban designer must have (1) the skill to interpret planning decisions and data into architectural form and (2) the special ability to collect, analyze and evaluate site data (topography, soil conditions, orientation, etc.), building costs, and building functions. Members of the city planning faculty believe that these are only a few of the skills required; to be effective, they contend that the urban designer must adopt a whole new decision system and the skills that go with it if he is going to make any worthwhile contributions to the design of the city.

Leading practitioners in the various fields agree, in one way or another, with the opinions expressed above and choose to assign a multi-functional role to the urban designer who's function it is to both interpret as well as coordinate planning decisions in terms of physical and visual form. The urban designer is a short as well as a long-range planner/designer, a site as well as a large-scale (total environment) planner/designer, a consultant, an educator, and a team member or leader. His skills embrace those expected of an architect, city planner, and landscape architect.

IV. Evaluation. Evaluating urban design and the abilities of the urban designer is being accomplished on an intuitive rather than a rational basis, his performance in the traditional design professions,

and at a lesser scope than the total environment.

Since it is humanly impossible for any one person to have a high level of competence in all of the skills required of the urban designer, it is concluded that the urban designer exists as an ideal type - thus one reason for supporting this method of evaluation. Another reason is the absence of visual objectives and opperational sets of explicit, hierarchically arranged criteria which have a consensus of the professionals, say nothing of the layman.

Continuing the evaluation of urban design and urban designers in the above manner, perpetuates traditional theories and methods for dealing with the physical character and visual form of the urban environment. There are some who believe that the failure to produce worthy urban design may be due to the fact that traditional methods and approaches are being utilized to cover contemporary dynamic urban problems and opportunities.

V.   Training. To train urban designers in the various skills required to exercise his unique reason for being, the selected schools are conducting their programs on an inter-discipline basis. Only Harvard and the University of Pennsylvania have landscape architectural departments; all have city planning departments. The majority of the faculty assigned to urban design programs have formal training in architecture with the University of Pennsylvania having the most evenly ballanced faculty (many possessing formal training beyond a bachelor's degree and experience in two of the three design professions).

The training and experiences of the faculty directly influence their attitudes and beliefs toward the design of the form of the city, their definition and interpretation of the scope, objectives, and role

of urban design, and its relationship with the other design professions. Their training and experiences also influence the training of potential urban designers. Von Moltke's experience in Philadelphia interpreting planning decisions underscores Harvard's attitude, Bacon's role as Director of City Planning in Philadelphia (and visiting professor at Pennsylvania) and Crane's role in the Boston Redevelopment Authority reinforces Pennsylvania's attitude toward both integrating and interpreting planning decisions with visual matters, and Colin Rowe's deep interest in architectural history is evident in the axial relationship and composition of buildings and spaces of the student's work at Cornell can be taken as cases in point.

Since the faculties of the selected schools believe that the urban designer must be a highly skilled three-dimensional designer, an architectural degree or its equivalent in design training, a high scholastic average in undergraduate design coursework, and letters of recommendation are the primary requirements for admittance into the three school's programs. Evaluation of the prospective students' graphic resumes emphasizes the ability to draw and to organize the material presented in a logical manner; interestingly, only a few faculty members expressed an interest in seeing student work which grappled with a unique design concept even if it did not come off in the final presentation.

The core of each academic program, occupying approximately one-half of the student's time in all cases, is the studio. Problems given reinforce the faculty attitudes and experiences stated earlier and tend to either center on specialized areas of the city such as the central business district, etc. and interpret planning decisions in three-

14

dimensional terms (Harvard and Cornell) or encompass larger areas such
as the total city and trying to combine and coordinate planning
decisions with visual matters (Pennsylvania).

Although the three schools profess an inter-discipline approach,
it appears that only the University of Pennsylvania has any collabora-
tive success in the studio. This is due to the fact that (1) the
training and experiences of the faculty extend into more than one
design profession, (2) the faculty of each department seems to relate
their studio problems, (3) the students are purposefully shifted each
term so as to have the benefit of tutelage under various faculty
members from all departments, and (4) the juries are composed of
faculty members and professionals from the three design professions (in
addition to others depending upon the problem), with the students from
the various departments attending.

Coursework in other fields, heretofore unrecognized as having much
relevance with urban design, or else non-existent, is also being intro-
duced into the programs. Cornell requires its students to take course-
work in perceptual psychology; all schools have optional subject matter
utilizing computers.

No research is being attempted at these three schools concerning
visual objectives and criteria. In fact, there seems to be little, if
any, research on visual form matters at any of these institutions other
than those connected with student studio problems. Should a student
have a topic which he wishes to pursue, he may nevertheless elect a
program of study to carry out such research. Theses for Master's
degrees are not required at Harvard or the University of Pennsylvania;
only the University of Pennsylvania has a doctoral program in this

15

subject area (all schools have doctoral programs in City Planning).

No formal contact is maintained between the graduates and the school even though current addresses are maintained by each school's Admissions Office. By utilizing such facilities, the author found that all but three of the 40-odd graduates of Harvard's program are in architecture; approximately one-half of the graduates are in foreign countries.

VI. __Massachusetts Institute of Technology.__ Although M.I.T. was not included as one of the schools selected for study, nevertheless, the author felt compelled to include some mention as to how the faculty responsible for this program in the Department of City and Regional Planning regard this subject, since it represents another attitude toward the scope, objectives, role, and skills of urban design and its practitioners.

Urban design, as viewed by the staff in charge of the program, is city planning. Urban design is not a separate profession but rather an integral part of preparing a comprehensive plan for guiding city development. An urban designer must be a thoroughly trained city planner, therefore, academic emphasis in this area at M.I.T. is in addition to the normal course requirements for the master's or doctoral degrees in city planning. A man so trained would be either a professional city planner or work as a team member in a large planning or architectural organization. He would be expected to have a competence in the basic skills of designing and planning in addition to a speciality in the visual implications of city plan proposals.

Admittance to the course is open to students with design backgrounds, however, it is not mandatory that the candidate possess a

16

degree in either architecture, landscape architecture or planning.
An aptitude plus some introduction to design, graphic skill, and a good
general education in which a bachelor's degree has been attained are
the primary requirements for admission.

Urban design research is being conducted at M.I.T. Currently the
staff and degree candidates are undertaking various research problems
concerned with the visual form of the urban environment involving goals
and objectives for the visual form of the city as well as deducing
methods for analyzing and evaluating the perceptual elements. Little
work, unfortunately, is being carried out at the site planning level.

VII. Recommendations for Further Study. All aspects of urban design
are open to exploration. Further clarification of its scope and
objective, its role and relationship with the other design fields as
well as the newly acknowledged professions having relevance to the
shaping of the urban environment, in addition to discovering new
techniques and methods for its practice are urgently needed. Break-
through in any one of these areas would greatly enhance our understand-
ing of the problems and opportunities of this subject, would help to
alleviate the confusion and misunderstanding that presently exists,
would serve as new guidelines for educating and training both profes-
sionals and laymen, and would acknowledge urban design as a unique and
great art for shaping the physical character and visual form of our
urban environment.

Section II

THE SCOPE AND OBJECTIVES OF URBAN DESIGN

Section II

THE SCOPE AND OBJECTIVES OF URBAN DESIGN

Background

Some of the many factors, occurring predominantly in this century,
have brought to the fore the subject of Urban Design and will be
discussed in this section.

In discussing the rise of urban planning education in the United
States, Professor Fredrick J. Adams, points out that the establishment
of a school of Civic Design at the University of Liverpool in England
at the beginning of the twentieth century was an important event in
the beginning of academic planning programs.[2] Thus we find the term
"Civic Design" linked to the planning profession at its very
beginning.

Although architecture and landscape architecture heavily
influenced the beginnings of the profession of urban planning and its
academic programs (most of the students and practitioners had training
in one of these professions before finding their way into planning),
urban planning tended to be more socially and economically than
visually oriented.[3] Some of the new profession's visionary leaders
were, nevertheless, thinking and practicing in a comprehensive manner.
Ebenezer Howard's Garden City concept as well as Perry's neighborhood
unit concept extolled not only a better social but also a better visual

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[2]F. J. Adams, Urban Planning Education in the United States (Cincinnati, Ohio, Alfred Bettman Foundation, 1954), p. 1.

[3]Ibid.

18

environment. Yet the message of being concerned with the total environ-

ment was not clear or loud enough to be understood and heard by the

general practitioners in all of the design professions, thus a fragmen-

ted approach prevailed by accepting the belief that each profession had

jurisdiction over a particular aspect of the urban environment.

This was the era of utopian schemes with work directed toward new

towns, nevertheless, the planner in general was approaching the city

from the "City Practical" side while the architect kept himself busy

with the "City Beautiful" movement or lending his support to the "Le

Esprit Nouveau"[4] and the eventual rise of contemporary architecture.

It was not until 1950, some thirty-five years after the beginning

of urban planning in this country, that the majority of professionals

began to realize that existing as well as new cities should be satisfy-

ing asthetically as well as economically: "that this should mean more

rather than less efficient communities."[5]

Concomitant with the above developments, the population of the

United States was not only growing at a rapid rate, but it was also

shifting from the farm to the city and then partway back again to a new

form of urban development called the suburb - a sort of combination

between the city and rural environment. Although city building is as

old as civilization itself, twentieth century urban growth was and

continues to occur at a scale different from anything known previously.

Twentieth century terms such as "connurbation" and "megalopolis" bear

witness to this fact.

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[4]"The New Spirit" - An international move toward stylistic purity
that began around 1900.

[5]F. J. Adams, op.cit., p. 2.

Technology must also be mentioned as it provided the means by which the farmer could leave the field, the human could travel farther faster, and the city could rise to dizzying heights. Technological advancement has permitted the changing and altering of the urban form at a speed unparalleled in history. In view of the almost daily changes in technological accomplishments, it seems safe to assume that future technological innovations will bring about even more rapid and startling techniques and methods for manipulating and rearranging the environment. "Kleenex" homes and clothes which can be thrown away at will, complete individual home utility systems which do not require wells, septic tank or public utility systems, and transportation systems which utilize electric beams rather than concrete strips for moving people and goods may be "just around the corner" and available to the general public at popular prices before this century is out.

Although the population of the United States has flocked in great numbers to the city and then partway back again to the suburbs, if they can afford it or allowed to, society continues to extoll the values of the small community or the farm.[6] Many urban dwellers while welcoming the employment opportunity and the amenities of the city, nevertheless, still desire a plot of ground that they can call their own, away from the busy and noisy streets where their children can play and they can relax. They still possess their desire to hunt, fish and walk the woods like their forefathers. They hope, too, that there will be a few

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[6]E. Higbee, Farms and Farmers in an Urban Age (New York: Twentieth Century Fund, 1963), pp. 77-94. Many of our farm programs enacted in recent years have been argued on the basis of preserving the small farm family and his way of life even though it is clear that they are leaving in significant numbers for the city.

people in the urban environment who can be counted upon as friends in good times as well as bad.

To meet the needs and desires of the urban dwellers and to handle the shift of population from the farm to the city, the Federal Government continues to involve itself, in one way or another with almost - if not all - aspects of urban living. In order to realize the "Great Society" the Johnson administration will almost certainly bring into existence a Department of Urban Affairs, with a secretary possessing Cabinet rank, before 1965 is out, to deal more fully and efficiently with the various and sundry urban Federal programs. Whereas in previous years the Department of Agriculture has had a budget exceeded only by expenditures for defense and interest on the national debt,[7] it is almost certain that this newly created department will have a budget which will exceed that of the Department of Agriculture in the future.

To make the change from rural to urban complete, the laws of the land have been rewritten to permit urban land manipulation and control for "public good".

> "Regard of the law for private property", wrote Blackstone, "is so great. . .that it will not authorize the least violation of it, not even for the general good of the whole community;" and in the eighteenth century, the elder Pitt declaimed that ". . . the poorest man in his cottage could defy the King - storms may enter, the rain may enter, but the King of England cannot enter." In sharp contrast the United States Supreme Court, by upholding in sweeping terms urban redevelopment legislation, has ruled in effect that the King not only may enter, but may remain, in the name of general good, indeed for the very purpose of keeping the rain out."[8]

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[7] Ibid., p. 4.

[8] C. M. Haar, _Land Use Planning: A Case Book on the Use, Misuse and Re-Use of Urban Land_ (Boston: Little-Brown, 1959), p. vii.

Needless to say, with pressures on the city, due to expanding population on one hand and societal values and cultural changes on the other, coupled together with technological advances unparalleled in history, various attitudes toward the shaping of the urban environment were conceived. In the list below, the author has identified some of these attitudes which he has encountered in his coursework at M.I.T. They are diametrically opposed to one another and it is the author's contention that they directly influence academic urban design program objectives and curricula.

1. Existing/New Form

   a). The city is an unique individual experience, coming naturally out of long development; therefore, delicate and sensitive adjustment to its form is necessary and mandatory in order to conserve and enhance it.[9]

   b). The urban form implications of the metropolis and megalopolis are peculiar only to this century, therefore, the design of these new forms requires major surgery of the old city in order to accommodate these new forms and the needs and desires of the inhabitants.[10]

2. Rural/Urban

   a). The city is evil, perpetuating crime and other social ills; therefore the city should be dispersed or at best

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[9]S. E. Rasmussen, Towns and Buildings (Cambridge: Harvard University Press, 1951).

[10]L. Mumford, The City in History (New York: Harcourt Brace and World 1961), p. 554.

saturated with green.[11]

    b). The city offers unique positive factors and amenities which demand an urban environment. "The suburbs, no matter how healthy they are, could never create this kind of tense and meaningful social life that one gets in the city."[12]

3. Order/Richness

    a). The city is physically and visually chaotic and must be brought to order to make it livable; therefore, formal plans, regulations and geometric designs are necessary.[13]

    b). The delight of the city is its contrasted, spontaneous, variety. To achieve richness, shops, factories, apartments, offices, markets, side-by-side and above and below one another is required to ensure that there will be something doing in the city at all hours of the day and night.[14]

4. Function/Form

    a). The city is a functional object; its very beauty is derived from attaining functional perfection.[15]

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[11] F. L. Wright, Broad Acre City, Spring Green, Wisconsin, 1940.
F. L. Wright, The Disappearing City (New York: Stratford, 1932).

[12] L. Mumford, "Culture of the City," AIAJ (June 1961), p. 58.

[13] Tunnard and Pushkarev, Man Made America - Chaos or Control (New Haven: Yale University Press, 1963).

[14] J. Jacobs, The Death and Life of Great American Cities (New York: Random House, 1961).

[15] Charles - Edouard Jeanneret LeCorbusier, The City of Tomorrow and Its Planning (New York: Brewer and Warren, 1930).

b). Form precedes function in the design of the form of the
city.[16]

5. Scale

a). The city should be reduced to a human scale; therefore,

the design of its form should seek irregularity,

intimacy and quaintness: "If you are thinking of the

culture of cities, forget about the damn motor cars and

plan a city on the human scale for lovers and friends."[17]

b). "In the building of our cities, a new urban scale must

be achieved, new kinds of spaces must be created. . .

the scale and size of the places must be precisely

related to the type of activity they house. . .the space

created must be a function of the activity, the surround-

ing buildings and the number and kind of users antici-

pated if it is to be successful."[18]

6. Scope

a). Aesthetics is applicable to only parts of the urban form

rather than the total form. "A beautiful city is simply

the sum of a large series of smaller areas which are

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[16]C. Moore, _Daniel H. Burnham - Architect, Planner of Cities_ (New York: Houghton, Mifflin and Co., 1921), Vols. I and II.

[17]L. Mumford, "The Culture of Cities," _AIAJ_, (June 1961), p. 6.
C. Sitte, _The Art of City Building_ (New York: Reinhold Publishing Corp. 1945). First published in Vienna in 1889.

[18]M. Hoppenfeld, "The Role of Design in City Planning," _AIAJ_, (May 1961), p. 63.

beautiful in themselves."[19]

b). Aesthetics is applicable to the total urban form when

considered as another aspect of comprehensive planning

(like the social and economic aspects), and can be

accommodated at the city scale.[20]

Various attitudes growing out of one's background, training and

feeling toward the urban environment and falling somewhere along the

continuum between the above listed polarities reinforce either a

limited or total approach, either a collaborative effort or steadfastly

supports one profession or another in dealing with the problems - or

opportunities - of the urban environment. Although a similar attitude

may be embraced by a large number of professionals either in the same

or different professions, (and their respective academic programs) the

individual interpretation could lead to quite different and diverse

design solutions.

Visits to the three selected schools confirmed both points of

view. Student work, although prefaced on the same overall objectives,

would differ to a great degree in the final analysis even though they

seemingly satisfied the original objectives.[21] As to the effect of the

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[19]
Lynch and Rodwin, "A Theory of City Form," JAIP, Vol. 24, No. 4,
(1958), p. 203. This statement was cited by the authors as a tenuous,
traditional design idea.

[20]
M. Hoppenfeld, op.cit., p. 41.
Lynch, The Image of the City (Cambridge, Massachusetts: M.I.T.
and Harvard Presses, 1960), pp. 115-117.

[21]
Student's work would vary in such aspects as spatial relation-
ship and scales, connoting areas of critical importance in the success
of the scheme, predicting which existing areas would or should change,
and stagging the development over time.

attitudes on the urban design program, additional attitudes dealing with (1) the definition and interpretation of the term "urban design" and its role, and (2) the relationship between urban design and the profession of architecture, landscape architecture and city planning also played a strong part in determining program objectives and curricula content.

Whereas in 1950 only a handful of professionals were concerned with "total scope", one needs only to leaf through recent professional journals to see the amount of print that is devoted toward reorienting the various professionals to view urban problems comprehensively. Phillip Will in architecture,[22] Edmund N. Bacon in both architecture and city planning,[23] and Patrick Horsbrugh in landscape architecture[24] are only a few of the many writers expounding on the subject. In addition to these traditional professions which have been concerned with the physical design of cities, other disciplines are now being recognized as having something to say on the subject of form and spatial relationships. While the civil engineer, with his transportation network, etc. has taken on new stature in recent years, the psychiatrist claims that the physical design of cities and buildings

[22] P. Will, "Cranbrook, 1963," _AIAJ_, (November 1963), p. 48.

[23] E. N. Bacon, "Designing Urban America," _AIAJ_, (March 1963), p. 33.

[24] P. Horsbrugh, "Reverberations: Landscape Interpretations and the Planning Arts," _Landscape Architecture_, (October 1961), p. 17.

also lies in the domain of mental health.[25]

It is in the summation of all of the preceding factors, attitudes, and redefinitions of traditional and recognition of new professions, which also are dealing with the form of the urban environment, that urban design comes to life. As was mentioned earlier, the definitions attached to urban design and its interpretation according to one's background, attitudes and training were found to have a strong influence in formulating academic urban design programs.

It should be made clear at this point, however, that a hierarchy between attitudes, redefinition of professions and definition of urban design has not revealed itself during the course of this study. It appeared that this was more cyclical in nature with definitions changing as attitudes changed and vice versa. By failing to clearly define urban design and leaving such a definition to the whims of one's experience, training and changing attitudes, one writer has been prompted to say that the topic has degenerated to nothing more than:

> " . .petty professional jealousies which are as open to question as certain jurisdictional disputes between labor unions."[26]

Definitions of Urban Design

It is necessary, nevertheless, to note the various definitions of

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[25] L. J. Duhl, "Urban Design and Mental Health", AIAJ (March 1961), pp. 48-50.
R. Sommer "Personal Space", AIAJ, Vol. 38, (December 1962), pp.81-3.

R. Sommer and G. W. Gilliland, "Design for Friendship," AIAJ, Vol. 38, (December 1962), pp. 84-86.

L. Uhr, "Planning for Beauty: Could the Psychologist Help", JAIP, (February 1958), Vol. 24, pp. 25-27.

[26] M. L. Rockwell, "Urbanism," AIAJ, (February 1963), p. 12.

Urban Design that have been developed over the past years since they sum up, in a large measure, one's attitudes, training, experiences, concerns and desires about this subject.

The term does not appear in Webster's or in many of the other standard reference sources that the layman as well as the professional would refer to for a definition, however, the Encyclopedia Britanica, in discussing the rise of the planning profession in the United States, does define the "area" of Urban Design. Using this as a springboard toward other definitions of the term, it is worthwhile to quote it here:

> "The fact that United States City Planners were not necessarily
> competent in the design of three-dimensional forms gave rise to
> a new area called Urban Design. Practitioners of Urban Design
> could be considered as specialized architects or as specialized
> city planners. They worked on a scale larger than the single
> building but smaller than the entire urban area (except for
> small municipalities) and also at a shorter time range than
> most city planning. An important distinction was that urban
> design worked toward the completion of three-dimensional
> projects, whereas city planning, based upon a concept of
> perpetual change, guided change toward desirable objectives
> (which themselves would also change) rather than toward fulfill-
> ment of a specific design. Thus urban design, like architecture
> and other professional disciplines, was an activity essential to
> longer-range, larger-scale city planning, but distinct from it."[27]

While this definition sets urban design in an historical context, a current definition by the AIA and AIP states:

> "Urban Design is defined as attention to the perceptual elements
> of the urban environment. Urban Design is devoted primarily,
> but not entirely, to the perception through sight, of urban
> elements which are primarily three-dimensional, and fixed, but
> which may include moving objects. Urban design is focused
> primarily on aesthetics rather than total perceptual experiences -
> i.e. the kinds of experience that enhance and enrich daily life,

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[27] J. T. Howard, "The Planning Profession," Encyclopedia Britanica, Vol. 5, 1964, pp. 818-19. It should be noted that this definition was written by a leading city planner, Professor John T. Howard of M.I.T.

rather than those which provide mundane information."[28]

Technically, the word "design" means the conscious arrangement (design) of elements to suit a purpose. Theoretically, therefore, the economist, the landscape architect, the lawyer, etc. could be considered as "Urban Designers" since each is consciously arranging various elements of the urban environment to achieve a purpose, objective or plan.

In considering these various definitions, it is little wonder that sharp controversy has sprung up among the various professions! Key issues can be easily identified: (1) the primary concern for three, rather than two-dimensional design, (2) the apparent gap existing between the various professions, (3) the supposedly limited scope and time sequence of urban design, (4) the reliance upon perceptual psychology, and (5) the admittance of other professions, in addition to the traditional ones, into the area of urban design.

With the above definitions and issues in mind, the definitions of urban design as formulated by the three selected schools can be examined in order to determine their particular attitude toward the issues raised.

HARVARD UNIVERSITY

Although the Official Register[29] of the Graduate School of Design does not explicitly state a definition of urban design, it is, never-theless, possible to get some idea of their interpretation of the term.

28
A.I.A. Report of the Planning Policy Committee on Urban Design Methods, (Washington, D.C.: The Institute, October, 1962). The AIP published a similar statement in February 1963.

29
Official Register of Harvard University, Graduate School of Design, "Urban Design Objectives", Vol. LXI, Number 27, (October 1964),pp. 67-8.

Such ideas as "design at its broadest scale", "studies that bridge the
three professions", "factors that shape the city, and the visual
expressions of the various segments of the city", etc. indicate that
Harvard believes that urban design is a "gap filler" with a concern for
"three-dimensional" form of the city.

Professor Wilhelm Von Moltke, newly appointed Director of the
program, states that:

> "Urban design is that part of city planning concerned with
> perceiving and controlling order, with the developing of a
> master form and a master program. It is the most creative
> phase in which inspiration and artistic capacity play an
> essential role. . .our concern is not primarily large-scale
> architectural design or three and four-dimensional planning,
> is not a "Master Plan", but a "Master Program" since the
> latter term includes the dimension of time. The ideal is not
> a system in which the physical structure of the city is at
> the mercy of unpredictable change, the ideal is a kind of
> master form which can move into ever newer states of equili-
> brium and yet maintain visual consistency and a sense of
> order in the long run. This form will become the catalyst for
> future growth, a structure that can channel the forces that
> shape our cities, fulfilling not only the technical, but
> above all the human needs."[30]

Here Von Moltke acknowledges a close relationship between city planning
and urban design rather than architecture and also suggests that urban
design extends over a prolonged, rather than a finite period of time.

Associate Professor Jacqueline Tyrwhitt chooses to define urban
design simply as:

> ". . .an area of interaction between the three professions of
> architecture, landscape architecture and city planning. . . ."[31]

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[30] W. Von Moltke, "Education for Urban Design," unpublished student
handout, Harvard Graduate School of Design, Harvard University,
November 1964, pp. 1-2.

[31] J. Tyrwhitt, "Education for Urban Design," AIAJ (December 1962),
p. 100.

thus tending to aline her definition with the definition suggested in

the Official Register.

Assistant Professor Vigier believes that:

". . .Since we are dealing with a new and still rather amorphous
field. . .I would define urban design as 'the willful, three-
dimensional interpretation of planning decisions'. As such it
is concerned with every aspect of shaping the environment - from
the establishment of vehicular and pedestrian movement to that
of the architectural character of individual buildings and their
stylistic control; from the design of street furniture to the
grandiose perspectives. But urban design does not usurp the
traditional functions of other design disciplines or duplicate
them: it is closely related to them.

Following are my definitions of the four design disciplines:

Planning consists primarily, but not exclusively, of those long-
term functional decisions which affect the overall structure of
the community, such as transportation, land use, and the policies
to effectuate them.

Architecture consists primarily, but not exclusively, of the
detailed design of individual buildings or groups of buildings.

Landscape Architecture consists primarily, but not exclusively,
of the design of the environment between buildings, groups of
buildings, or built-up areas.

Urban Design links all three to the extent that it fills what-
ever gaps may exist among them. If we think of the design of
human settlements as a continuum of specialized efforts, the
end product of the planning-to-urban design sequence is a
readily perceptible image of the environment, illustrative of
its functions and generally satisfactory (or pleasing) to the
observer. . . .

Planning can be defined as a culturally oriented activity
which reflects a society's current system of goals and problems -
social, economic and functional. Like planning, urban design
should be considered and evaluated within a cultural context.
Its physical format, at any instant in time, is shaped by a
combination of cultural and ecological forces. . .But, however
these relationships may vary over time or from place to place,
I would argue that there exists one underlying constant in
urban design: the innate motivation of man to impose a sense of
order, related to his scale, upon his natural environment. . . ."[32]

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[32] F. C. Vigier, "An Experimental Approach to Urban Design," JAIP,
(February 1965), p. 21.

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Interestingly he recognizes perceptual psychology (and thus
another field is added to the three traditional ones) when he states:

> ". . .The end product of the planning-to-urban design <u>is a</u>
> <u>readily perceptible image of the environment, illustrative of</u>
> <u>its functions and generally satisfactory (or pleasing to its</u>
> <u>observer."</u>[33]

To summarize, the faculty of Harvard define the scope and object-
ives of urban design as (1) that part of city planning which willfully
interprets planning decisions in three-dimensions, (2) an area of inter-
action between the three design professions of architecture, landscape
architecture, and city planning, and (3) a field concerned with perceiv-
ing and controlling order, developing a master form which can grow and
change over time, conferring an image on this form which is illustrative
of its function and aesthetically satisfactory to its observer.

These beliefs fall between the attitude polarities hypothesized
earlier. Clearly evident is the attitude toward Order/Richness
(tending to associate more closely to a controlling order). Implicit
are the attitudes toward Scope (aesthetics is applicable to the total
form since urban design is three-dimensional interpretation of planning
decisions and is concerned with a master form), Scale (a variety of
scales can be used so long as the master form is comprehensible to the
observer).

The attitude toward Existing/New Form and Rural/Urban are less
clear. The author concludes from his visit at the School that a change
rather than a delicate adjustment to the form of the urban environment
is advocated and that an urban rather than a rural atmosphere is

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[33]Ibid.

desired in the city.

New attitudes expressed are that urban design is a gap filler between the professions and is primarily concerned with visual rather than social or economic issues, as such, it should be involved with perception psychology; it is a professional field interpreting planning decisions in three-dimensional terms.

UNIVERSITY OF PENNSYLVANIA

Rather than use the term "Urban Design", the University of Pennsylvania uses the term "Civic Design" for the title of their formal program. Whereas traditionally, "Civic Design" usually connoted isolated project work, Dean Perkins, in an interview with the author, believed the terms to be interchangeable; that civic design is concerned with the whole as well as the parts. David Crane, Associate Professor in charge of the civic design program, believes that civic design is a lower order than urban design since urban design can be practiced by many different people in different ways. Both Perkins and Crane agree that civic design is more closely related to architecture than city planning. As Crane put it during an interview with the author: "I am an architect, and a planner when I have to be." (From this statement, the author concludes that Crane considers himself as an architect rather than an urban designer or city planner). The University Bulletin bears these attitudes out by noting that:

> "The program concentrates on the creation of three-dimensional forms of the urban environment which are true expressions of the continually changing community."[34]

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[34]University of Pennsylvania Bulletin, Graduate School of Fine Arts "City and Regional Planning," Vol. LXV, No. 3, December 1964, p. 21.

The civic designer, who is an architect, must deal with key

concepts in shaping the urban form according to Professor David Wallace

(who is a trained architect as well as a city planner),

"Urban form is the composite of:

1. The state of being of the artifacts of the urban phenomena.
2. Their relationships to each other, to their natural environments and to man, over time; and
3. The purpose for which man intends them and utilizes them.

The three key concepts are: state of being, relationship and purpose. It is these concepts with which the civic designer must deal. Together they define a system whose interrelated elements are in a constant state of imbalance."[35]

Considering the above comments and statements, the faculty at the

University of Pennsylvania believe that Civic Design is (1) more

closely related to architecture since it (2) deals in three-dimensional

expressions, however, it is concerned with the whole as well as the

parts of the urban environment, over time and therefore is (3) a multi-

speciality or inter-discipline program rather than standing alone as a

separate profession. While the term Civic Design is interchangeable

with Urban Design in the minds of some, other members of the faculty

suggest that Civic Design is of a lower order than Urban Design.

Of the attitudes identified earlier only Scope (concern for

visual forms of the total rather than parts of the community), Function/

Form (a concern for the purpose for which the artifacts are to be used)

and Existing/New Form (a true expression - thus change tempered with

delicate adjustment - of the continually changing community) are

clearly identifiable.

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[35]D. Wallace, "Downtown Baltimore, A Case Study in Planning the City's Center," (unpublished Civic Design Studio problem handout, C.P. 603, Philadelphia: University of Pennsylvania, Spring Semester 1964).

A visit to the School confirmed that an orderly rather than a spontaneous arrangement of the artifacts is desired and that a variety of scales should be utilized in their design.

Additional attitudes suggested in the above statements are that civic design is architecture concerned with three-dimensional creation of forms which are true expressions of the changing community. Civic design both interprets and integrates visual matters with planning decisions since the practitioner is dealing with the concepts of state of being of the artifacts, their relationship with each other, and the intent for which man wishes to use them. No explicit statement is made by the faculty concerning observer perception of these three-dimensional elements which are true expressions of the changing community.

CORNELL UNIVERSITY

Cornell officially defines urban design as:

"An integrated field concerned with the solution in architectural terms of the developments proposed by city and regional planning."[36]

Associate Professor Colin Rowe, in charge of Cornell's urban design program, declines to tightly define the term and chooses rather to say that it lies somewhere between architecture and city planning. The difference between urban design and the other two professions, he believes, is that architecture is "object" oriented and city planning is socially and economically oriented. Urban design, on the other hand,

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[36]Cornell University Announcements, College of Architecture, "Urban Design," Vol. 56, No. 9, October 6, 1964, p. 8.

deals with the spaces rather than objects at a rather limited scope

which lies between the project and the total city and relies on city

planners for community social and economic data relevant to the problem.

In the department of City and Regional Planning, a number of

interesting views exist. Associate Professor Barclay Jones believes

that urban design is:

> "The articulation, meaningful accommodation, and expression of
> the human relationships that are embodied in the city."[37]

Associate Professor Hugo-Brunt believes that civic design and urban

design are synonymous, thus his definition for civic design is appli-

cable to urban design:

> "Civic Design is the art and science of the three-dimensional
> arrangement in building so that functions are resolved
> efficiently, a satisfactory aesthetic is attained and land is
> used to the best advantage to achieve urban beauty. It is,
> therefore, a process of change which continuously recreates a
> city as a physical assemblage of a social system in an attempt
> to provide the best expression of the highest common values."[38]

It was Professor Hugo-Brunt's belief that urban or civic design

differed from the other professions in much the same manner as out-

lined by Professor Rowe.

An interesting comment made by Associate Professor Stuart Stein,

in trying to define and distinguish urban design from the other pro-

fessions was his belief that city planning would become much broader

in scope (regional and national) and/or would become highly specialized

with respect to particular aspects of the urban environment and would,

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[37] B. Jones, "Design from Knowledge, Not Belief," AIAJ, (Dec. 1962),
p. 104.

[38] M. Hugo-Brunt, unpublished personal notes on C.D., Ithaca, New
York, Cornell University.

therefore, relinquish the city to the urban designer.

The different faculty members at Cornell have a somewhat diverse and conflicting attitude toward the definition of urban design. The architectural faculty tends to (1) limit the scope of the subject and (2) isolate it from the other professions. The city planning faculty, while realizing that it may continue to be isolated, nevertheless, would like (1) to broaden its scope to include not only the total city but also (2) other fields which have a bearing on the form of the city.

The expressed views of the faculty underline some of the earlier hypothesized attitudes. Readily identifiable are the attitudes toward Scope (unlike the attitude of Harvard and Pennsylvania, the Scope of urban design falls between the project and the city), Order/Richness and Function/Form (a concern for both order and form over function).

A visit to the School revealed implicit attitudes toward a super human rather than human scale, of axial relationships of buildings, spaces, and changing rather than delicate adjustment of the urban form to accomplish new development.

Once again, as in the case of Harvard and Pennsylvania, the attitude is revealed that urban design is primarily concerned with visual form. Urban design is also an interrelated discipline - a gap filler - concerned with interpreting developments proposed by City and Regional Planning.

Interestingly, the definition of the scope and objectives of urban design fall somewhere between those of Harvard's and the University of Pennsylvania's.

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MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Although M.I.T. was not selected as a school for study, the author

nevertheless would like to include the definition of urban design which

has been formulated by the faculty in charge of this program:

> " Urban design deals with the visual form of cities, regions,
> or large city areas. This type of design is not a separate
> profession, but an integral part of the preparation of
> comprehensive plans at the city scale. Only at one end of
> the spectrum does it shade into the mixed architectural -
> planning design of large project areas (redevelopment
> projects, city centers, etc.)"[39]

In essence, the faculty are suggesting that urban design is city

planning; that it is an aspect of comprehensive planning which has been

overlooked in the past.

It should be mentioned at this time that the faculty at the

various schools seemed to be of the belief that the term urban design

or civic design, as the case may be, is misleading and inadequate to

define the intent of this aspect of consciously planning the urban

environment. Although a consensus was reached regarding the primary

concern for three-dimensional involvement, there is less agreement as

to the positions of the traditional and new fields claiming a part in

the physical design of buildings, and environment with respect to

urban design.

Evaluation and Practice of Urban Design

Before concluding this section on the scope and objectives of

urban design, some consideration should be given to evaluating urban

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[39]"A Curriculum in Urban Design," Department of City and Regional
Planning, M.I.T., 1963 (Mimeo).

design.

Evaluation implies a set of criteria either explicit or implicit, operational or non-operational. To evaluate surely and effectively it is necessary that an explicit, operational set of criteria be formulated. In accepting any of the previous definitions, the professional as well as the layman, is faced with the problem of individually or collectively formulating a set of explicit, operational criteria to judge the ability and performance of the urban designer in analyzing, designing and testing the various elements which make up the environment to achieve a given set of objectives. Since urban design is concerned with visual as well as social and economic considerations, aesthetics as well as social and economic criteria will have to be formulated.

Although economic criteria can be made explicit and operational, there is some difficulty in making social objectives explicit and operational. At the moment, it may be impossible to formulate visual criteria which are explicit and operational.

The extreme difficulty in arriving at a consensus as to what is wanted visually, to say nothing as to what comes first in judging aesthetics or how much weight should be given to various aspects, is one of the more formidable problems that the urban designer faces.

Should he succeed in arriving at a consensus as to what is wanted visually, an equally formidable task awaits him in formulating a set of operational criteria which can be measured. Visual form criteria today remain nebulous, hard to define, and usually depend upon one's training, experience and socio-economic level.

It will probably be found that one set of hierarchical, weighted

criteria will not suffice for all situations since certain criteria may take precedence over others depending upon the situation and the scope of the problem. Therefore, various interdependent sets must be devised.

Since visual form criteria remain so difficult to make either explicit or operational and urban design varies in scope and time, various attitudes toward the practice of urban design have emerged. These attitudes are not mutually exclusive; all may be used in dealing with a particular situation depending upon its magnitude. All are open to question as to the quality of design that will be produced.

a). Openly, through the democratic process.

Like city planning, urban design should be practiced openly, through the democratic process. As one end of the continuum, this attitude suggests that decisions concerning visual form should be left open to the general public. In order to relate visual form matters to other concerns such as social or economic, the planning process[40] could be a useful framework for arriving at alternative solutions which integrate the various considerations together to meet the needs and desires of the people which can be publicly acted upon. Determination, again, of the public needs and desires with respect to visual form as well as other considerations is an important first step in the total process.

The argument against this attitude is that society does not care or is not educated in visual matters even if the process does produce

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[40]The planning process may be generally defined as goal-formulation, design, effectuation and feedback.

a valid and rational alternative. The lack of education on the public's part concerning visual matters is one of the constraints which prevents worthy urban design from being accomplished.[41]

b). Limited to a Sophisticated Group - "Men of Taste"

Urban design, being primarily concerned with matters of visual form, requires a group of individuals - men of taste - who can judge competently proposals and render decisions.

This attitude reorganizes the problem of bringing about a community consensus and suggests a sophisticated group effort to deal with visual form matters. While it may be relatively easy to choose such a group, there is still a strong possibility that agreement on visual form matters may not be reached.[42] Nevertheless, this attitude rationalizes that since visual form criteria are so subjective in nature, it would be far better to have trained men making intuitive judgements concerning visual form matters than total society.

c). One Person in the Key Decision-Making Role.

At the other end of the continuum, this attitude suggests the elimination of all actors - save one - who will make the final decision. Such an alternative seeks maximum efficiency in eliminating conflicting points of view. Indeed, the rapid pace in which we go about our daily lives and professional practices demands that we search out the "key man" who has the power to turn thumbs up or down on a suggested

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[41]M. Meyerson with J. Tyrwhitt, B. Falk and P. Sekler, The Face of the Metropolis, (New York: Random House, 1963), p. 235.

[42]D. A. Crane, General Comments on the Competition, Fifth Ruberoid Architectural Design Competition, the Ruberoid Co. New York, 1963. (See Crane's comment concerning jury disagreement over the weighting of criteria in a national urban renewal competition), pp. 42-46.

proposal. This attitude is reflected in the architect's belief that "good design is done by one man. A committee cannot create a thing."[43]

Regardless of the attitudes selected, it seems apparent that when it comes to matters of visual form, wide disagreement will almost certainly prevail due to the lack of explicit operational criteria arranged in a hierarchy which have the consensus of the layman as well as the professional. If good urban design is going to flourish, it seems that this is one of the paramount issues which faces the field today.

In order to deduce a set of criteria which has a consensus and is operational, new teachings and methods for dealing with visual form matters seem to be required. Possibly one reason for our failings today in the visual form of our environment is that we have relied upon traditional methods and approaches to solve total new and infinitely complex problems which have occurred in this century.[44]

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[43]
N. Gorwic, "The Changing Role of the Architect: Need and Responsibility," AIAJ, (December 1961), p. 91. (See also Louis Kahn's statement in this same article, p. 96).

[44]
C. B. Wurster, "Architecture and the City Scape," AIAJ, (March 1961), p. 31.

Section III

THE ROLE OF THE URBAN DESIGNER

Section III

THE ROLE OF THE URBAN DESIGNER

General

Delineating and expanding the scope and objectives of urban design

has pointed up the definitions of the traditional professions, or the

newly acknowledged ones for that matter which have a bearing upon

consciously shaping the urban environment, in meeting the challenges

and demands of today's, to say nothing of the future's, visual form

problems. It is generally agreed that to meet today's urban design

problems, the urban or civic designer must be a competent and creative

designer. But this, many say, is not enough. He must also be

grounded in the social, economic, scientific and cultural aspects of

the urban environment and the implications and interweavings that each

of these have upon the shaping, both two and three-dimensionally, of

that environment. In this context, the range of required skills would

be endless, therefore, the academic programs are both leading and

following the practitioners in the various fields in an attempt to

equip the potential urban designer, in a short period of time, with the

"tools" to fulfill his role in society.

What, then is the role of the urban designer in today's society?

How do his activities differ from those of the other professions?

What skills are primary in fulfilling his role? Finally, how is he

evaluated?

HARVARD UNIVERSITY

Professor Von Moltke at Harvard suggests that the role of the

urban designer is to fill the gap that exists:

". . .between the three professions which must play an increasing
important role in shaping our environment if we want to overcome
our present state of urban chaos, and face the immense problems
of our time. . .great strides have been made in methods of
analysis of the impact of technical innovation and of the
geographic, social, political and economic forces that shape our
cities, but little progress has been made in synthesis, which
will not only fulfill the functional, but above all the human
needs. . . [he is] dealing with large-scale design problems,
which require the combined skills of the planning and design
fields, dealing on the one hand with technological needs of
mobility and communication and on the other hand with human scale
and liveability."45

In a fall studio problem, Professor Von Moltke stated his opinion that

urban renewal is one of the most effective tools for reshaping the city

and that the role of the urban designer in urban renewal was that:

". . .he must work closely with the economist, social and
functional planner and the decision-maker in order to make
these groups aware of the three-dimensional effects of their
ideas and intentions, to show how design can further the goals
and to fully understand all the forces which will influence the
physical design.
    Once the general planning decisions have been reached, the
urban designer has the task of working out a design system, or
framework for development, that interprets the planning
policies in terms of design that can easily be grasped by the
decision-makers which may include the citizens at large and
which can be carried further by architects, allowing a
reasonable degree of variation."46

45W. Von Moltke, Education for Urban Design, (Unpublished student
handout, HGSD, Cambridge, Mass.: Harvard University, November 1964),
pp. 1-2.

46W. Von Moltke, "Redevelopment of the Fort Point Channel and the
Prudential-Fenway Areas in Boston", Urban Design Studio,No. 2-5ab,Harvard
Graduate School of Design, Harvard University, Cambridge, Fall 1964,p.1.

Professor Wallace at the University of Pennsylvania believes that:

"The civic designer, as I define him, does not exist except as an ideal type. His job has two parts: first he must understand the nature of this system,[47] the ways in which it may be controlled to men's collective purposes, and the purposes for which it is valid for society to exert control. Many people in this sense act to varying degrees as civic designers (eg. Crane's city of a thousand designers), and no discipline, not even architecture, may lay sole claim to this role, except in ignorance. In this sense, I define the job of the civic designer as much the same as that of the so-called "physical" planner.

The second part of the civic designer's job, however, distinguishes him from the "physical" planner in emphasis, method and skills. This second job requires him to prepare recommendations for alternatives in the urban artifacts' state of being (existence, alteration, process) with methods and skills adequate to tracing their implications for change in the total system, and evaluating these implications, particularly from the point of view of his special emphasis of design.

He must be able to trace out these implications in all dimensions implicit in these concepts.[48] Professor Geddes has suggested a continuum of scale levels appropriate to the civic designer: from the macro-scale of regional form, to the micro-scale of the building and urban detail. Although, cuts across this continuum may be arbitrary, it is useful in achieving civic design problems to think in terms of major breaks between visual and suggested relationships, and within each major classification, to use recognition of relationship and purpose as the guide for further subclassifications. This in a sense is the rationale behind Lynch's and Appleyard's methods (the view from the road), but it must go much further than their somewhat limited vocabulary."[49]

Regarding the civic designer's skills and measure of success, Wallace

continues to say that:

". . .to perform these two jobs, in particular the latter, the civic designer must be a highly skilled architectural designer,

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[47]As identified earlier, dealing with the scope and objectives of Civic Design. See p. 34.

[48]Ibid., . .

[49]D. Wallace, "Downtown Baltimore, A Case Study in Planning the City's Center," (unpublished Civic Design Studio problem handout, C.P. 603, Philadelphia: University of Pennsylvania, Spring Semester).

must have all the analytical and coordinative skills of the city
planner, and the concern and understanding for natural phenomena
of the McHarg-type[50] landscape architect.

No one man can meet all of these requirements, but certainly
the civic designer must have more than a superficial familiarity
with them all. The extent to which he succeeds in all rather
than any one is the measure of his competence as a Civic Designer."[51]

In support of his belief that the civic designer is an architect, he

concludes:

". . .on this basis, can civic design be a profession? The civic
designer, as I have defined him, must be an architect. Is he
then a specialist within architecture? Clearly not, for the
additional skills he must learn and methods he must apply are not
architectural in a narrower sense. They tend to make him more
than an architect rather than more of an architect. He must
become a multi-specialist instead of the generalist with either
no specialty, or only one. With these requirements civic design
probably cannot meet any rigorous test of professional status,
and must be taught, to the extent we can, as a multi-specialty
or an inter-disciplinary program."[52]

CORNELL UNIVERSITY

At Cornell, Associate Professors Rowe and Hugo-Brunt see the Urban

Designer as fulfilling the role of a highly talented three-dimensional

designer who can work primarily with large-scale projects. He is the

one who will eventually give form to the various projects and although

concerned with social and economic considerations as they relate to the

urban environment in question, he relies strongly upon the planner to

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[50]Referring to Professor Ian McHarg, Professor of Landscape Archi-
tecture, University of Pennsylvania and Chairman of that department.
"The Landscape Architect has a role in affirming the importance of open
space in the physical environment; he has no less a task in learning to
manipulate as an artist the elements which are his tools - space, light;
and shadow, sticks, stones and water, trees, flowers, grasses, and the
changing seasons" (University of Pennsylvania Bulletin, Graduate School
of Fine Arts 1965-66, p. 45.)

[51]Wallace, op.cit., p. 3.

[52]Ibid., pp. 3-4.

collect, analyze and present him with this data. The urban designer is

primarily responsible for collecting, analyzing, and evaluating data on

the site (location, utilities, orientation, topography, views, etc.),

building function and costs and the design of the project.

In sharp contrast to this more traditional architectural approach,

Associate Professor Jones in the City Planning Department, believes

that rather than the architect "being a creature apart," he should get

more into the swing of things:

> "An important breakthrough has occurred in the last few decades
> in our attitudes toward knowledge and education, or the trans-
> mission of knowledge. After many useful decades in which we
> tended to concentrate on the differences between the various
> categories of behavior we are now turning to concentrate on the
> similarities. . .scholars today often find it easier to talk to
> colleagues in other departments than some members of their own
> departments. . . .The old disciplinary lines are breaking down.
> . .yet architecture today is one of the most conservative and
> traditional of the academic professional fields so far as the
> recent revolution in attitudes toward behavior is concerned."[53]

Professor Jones argues that the urban designer must "broaden out" in

his approach to a problem, must design from knowledge rather than

reason,[54] and that he will continue to fail in his role of shaping the

physical and visual form of the urban environment if he doesn't free

himself from the bonds of traditionalism in architecture.[55] Both the

Rowe/Hugo-Brunt and the Jones attitudes indicate that the urban

designer's activities are different from that of the architects,

however, the degree of difference varies considerably. While one view

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[53]B. Jones, "Design from Knowledge," AIA-ACSA Seminar Paper,
Cranbrook, Michigan, June 1962, p. 2.

[54]Ibid., p. 10.

[55]Ibid., p. 1.

suggests only an adjustment in scale needs to be made, the other is

preaching total revolution and reorientation.   Jones concludes by say-

ing that:

> ". . .there isn't the tiniest hope that architects will make
> any worthwhile contribution to urban design problems, given
> the present scales and complexities of our cities. . .until
> [they] change and adopt a new decision system."[56]

Evaluating the urban designer varies too with the viewpoints taken.

Although Jones does not discuss the resultant visual form qualities,

he is far more interested in effectuating a more powerful decision

system as a basis for design; a more fundamental process for evaluating

urban design and presumably urban designers.[57]

The Rowe/Hugo-Brunt view, on the other hand, tends to suggest that

the urban designer be primarily evaluated on the resulting aesthetic

aspects of the project - the space relationship, the form quality and

differentiation since this is his primary role and function.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Although M.I.T. was not included in the schools selected for study,

nevertheless, the author would feel remiss in his duty if he did not

include the views of the urban design faculty concerning the role of the

urban designer.   There is a general consensus (in the Department of

City Planning) that urban design is another aspect of City Planning -

indeed, the brochure outlining City and Regional Planning at M.I.T.

states that:

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[56]Ibid., p. 10.

[57]Ibid., pp. 18-19.

". . .an urban designer must be a thoroughly trained city planner, and this special coursework is in addition to the basic curriculum for master's or doctor's degree."[58]

As such, the urban designer and the city planner would and should be one in the same person, with the additional role of conferring a satisfactory (pleasing) visual form upon the environment while designing it comprehensively. His additional skills would include the ability to (1) survey, analyze and evaluate the elements of the urban environment which go to make up its visual form, (2) manipulate (design) the various elements of the environment to achieve, visually, a set of given goals and objectives, (3) formulate visual programs and controls at various scales of urban development (from the project to metropolitan), (4) illustrate design proposals verbally, graphically and orally, (5) synthesize data from relevant professions and disciplines and extract pertinent data which has relevance to visual form matters, (6) research, independently, matters having to do with visual form, and (7) educate laymen as well as professionals in matters of urban design.

Evaluation of his ability would be on a more comprehensive basis than just purely aesthetics or three-dimensional form qualities.

LEADING PRACTITIONERS IN VARIOUS PROFESSIONS

Leading practitioners in the various professions assign the Urban Designer a multi-functional role, and in doing so, they underline, to some extent, the attitudes expressed previously by the faculty members of the selected schools. They see the urban designer as (1) a

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[58]City and Regional Planning at M.I.T. (Cambridge, Massachusetts, Department of City and Regional Planning, M.I.T., 1964), p. 6.

coordinator, (2) an interpreter, (3) a site as well as a large-scale

planner/designer, (4) a short as well as a long-range planner/designer,

and (5) a consultant, either as a team member of leader. Edmund N.

Bacon believes that the Urban Designer must:

> "Develop a competence in the design of the larger area. . .since
> the design of a large area is no more the result of designs of
> individual buildings than is the design of a single building the
> product of the accumulation of well-designed rooms. . . [he must
> develop] techniques for the interlocking of larger scale design
> with individual project design. . . ."[59]

Charles Blessing suggests that:

> ". . . .he must retain the basic control of design, not only of
> individual buildings, but of all man-made environment."[60]

Garret Eckbo, a noted landscape architect, believes that the Urban

Designer must:

> ". . . .view buildings and trees, shrubs and signs, bridges and
> hills with a balanced eye, developing the most meaningful
> relations between them.
>   Always the continuity of the landscape, in living harmony,
> and the basic patterns of ordinary living, the central triangle
> between home, work and play, must be the primary considerations. .
> . [urban design] is a new field of design produced and required
> by problems of a scope and complexity not solved by existing
> processes."[61]

Architect Chloethiel Smith identifies what she believes the

fundamental skills and abilities of the "Urban Architect"[62] to be when

she states:

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[59] E. N. Bacon, "Designing Urban America," AIAJ, (March 1961),p. 33.

[60] C. Blessing,"The Architect and the Planner",AIAJ (March 1961)p. 86.

[61] G. Eckbo,"Urban Design - A Definition",AIAJ (September 1963)pp.38-9.

[62] In a footnote, she states: "I will use the word 'architect', even
though there are many new titles incorrectly substituted for 'one whose
profession is to design buildings and superintend their construction;
the deviser, maker or creator of anything' - so I'll include cities as
'anything'. ∎

"He manipulates enclosed and open spaces. He plays the endless game of wall and window, both as it serves the inside of the enclosed space and as it serves as a part of the cityscape, seen by a passerby or seen as a backdrop from a room across the square. He arranges and rearranges buildings of different heights and masses and separates them by open spaces that enhance them as internal and external structures and by open spaces that serve as a focus for community life or a retreat from it. Yet throughout, he walks with the people. He is not a sculptor. City design is unique among arts, for it is meaningless unless it is built with people as well as stone and brick.

With sketch and model and words he tries to bring his client with him on these walks through the unbuilt."[63]

Interestingly, Catherine B. Wurster believes that one reason for our failure to produce worthy urban design today is that traditional methods and approaches are being used which are appropriate only to limited scope and static rather than comprehensive and dynamic problems.[64] This suggests that not only must the urban designer's skills be different from other professionals but that his tools which he uses to execute these skills are also different - or should be.

Summary

In summary, the role of the urban designer, as assigned to him by the various faculty members of the selected schools and leading professionals in the different design fields, is based upon (1) their attitudes toward the design of the visual form of the urban environment which fall along a continuum between the hypothesized attitude polarities such as Scope, Scale, Order/Richness; (2) their past training and experiences (Von Moltke, Crane, etc. as an urban designer or

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[63] C. W. Smith,"Cities in Search of Form," AIAJ, (March 1961),p. 76.

[64] C. B. Wurster, "Architecture and the City Scale," AIAJ, (March 1961), p. 31.

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architect interpreting planning decisions; Bacon, Jones, Blessing, Eckbo, etc. as city planners or landscape architects integrating activities with design; Rowe and Hugo-Brunt as architects deeply committed to historical approaches); and (3) their belief that none of the traditional professions in their present state are effectively coping with the physical character problems - or opportunities - of the urban environment. The abundance of definitions concerning the role of urban design, as well as its scope and objectives which were discussed earlier, indicates that a variety of interpretations of urban design exist not only in the various design fields but also in the academic institutions as well.

There is some disagreement as to the scope of urban design (Cornell's urban design faculty suggest that aesthetics is applicable only to parts rather than the total urban form), nevertheless there is agreement (1) in believing that an order, rather than a haphazard, shaping of the urban environment is desirable - indeed necessary - "if we are going to overcome our present state of chaos" (Von Moltke), and (2) in believing that the urban environment must embrace many interacting continuums such as Existing/New Form, Rural/Urban and Function/ Form - to what extent, no one says because no one really knows. This has lead Professor Jones to believe that until a new decision theory, based on knowledge rather than reason, is adopted, there isn't the tiniest hope that any worthwhile contributions to urban design will be made given the present scale and complexities of our cities.

Regardless of whether or not urban design is a separate field, the faculty members of the selected schools and leading practitioners in the various professions have assigned the urban designer a multi-

functional role varying in scope from the project to the metropolitan level of urban development.

It is generally agreed that he should be a creative designer, implying:

1. The ability to survey, analyze, evaluate, and manipulate various elements of the urban environment which make up its visual form in order to achieve a set of objectives.

2. The ability to illustrate verbally, orally and graphically his design intent and proposals.

In addition, there is a consensus, to some extent, that the urban designer should also:

1. Possess more than a superficial knowledge about the social, economic, scientific and culture aspects of the urban environment and how they interact and impinge upon the visual form of the environment.

2. Possess knowledge of values and objectives, the ability to handle complex sets of objectives systematically and rationally.

3. Possess knowledge of other disciplines and professions which are being recognized as having an influence upon the physical and visual form of the urban environment and its design (i.e. civil engineering, psychology, etc.).

The urban designer appears to be evaluated on his past performance (the ability to synthesize, to do imaginative and creative work; for example, his design work, report writing, etc., and experience in other fields of endeavor such as architecture, city planning, etc.).

This underscores the attitudes that prevail concerning this

subject (that urban design is a part of other professions rather than a separate entity), however, it may be argued that urban design, when considered in its full context is a new field rather than an aspect of the others, therefore, little, if any, such design has been attempted or accomplished. If any such design has been accomplished it probably exists on paper and will have to be evaluated in that manner. Due to the lack of visual objectives, explicit and weighted criteria which are operational and the difficulty of creating urban conditions and environments in the laboratory, any evaluation of a total environmental design will, at best, be superficial and subjective.

Evaluating urban design and its practitioners in other fields or at smaller scales, while it seems the only way at the moment, is, nevertheless, bad since it allows the examiner the easy way out and continues to perpetuate traditional techniques and old theories. Once again, the practitioners of urban design, as was pointed out in the section dealing with the Scope and Objectives, are faced with a critical need for visual objectives and explicit, operational and ordered sets of criteria having the consensus of the professional as well as the layman so that we may judge his performance and ability in conferring a meaningful visual form upon the environment while designing it comprehensively at varying scales.

Section IV

TRAINING THE URBAN DESIGNER

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Training in urban design, explicitly, has developed only recently.
Of the three schools selected for study, the University of Pennsylvania
has had the longest explicit program in existence - almost a full
decade. The urban design program at Harvard commenced in 1960, with
first degrees being awarded in June 1961, and Cornell's program is
barely two years old - having commenced in September 1963. Likewise,
much of the writing on this subject has occurred within the last
fifteen or twenty years as evidenced by the various professional
journals and faculty prepared bibliographies for the student's intel-
lectual consumption.

Program Development

Although explicit academic urban design degree programs have been
developed primarily in the last 10 years, it would be misleading to
give the impression that the subject has not been recognized in the
academic programs of the traditional professions. As was pointed out
earlier, one of the factors in the development of academic programs in
city planning was the Civic Design program at the University of
Liverpool in England at the beginning of this century.[65] The schools
of architecture in this country at some point in their program, usually
the final term or graduate year, extend the scope of a student design

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[65]See page 18.

problem to include either a section of a community (C.B.D., etc.) or a total community of limited size. A similar procedure is probably also true in the academic programs of landscape architecture. Such problems may be instrumental in directing a recent graduate into the field of city planning in order to relate and deal with the visual form of the urban environment in a more comprehensive manner.

A genuine concern for the visual form of the urban environment on the part of the practitioners as well as the students in the various design professions, in addition to their searching for an opportunity to either undertake or extend their formal training in this rapidly developing area, has obliged the academic world either to extend the scope of the traditional professional programs or create new ones.

The students, as well as the various practitioners have, therefore, influenced the development and shaping of urban design programs. It is a well-known fact that students do not hesitate to voice their opinions about the short-comings, and sometimes the virtues, of their academic programs. This seems to be an age-old tradition, yet there was evidence at each school visited that the academic staff were re-appraising their approach and type of problems given on the basis of student comment. Indeed, the interest and comment displayed by the students appeared to be one of the stronger criteria by which a staff member evaluated his particular course offering.

Of the students interviewed at the various schools, the predominant reason for their being in urban design was the inadequacy of their architectural training in preparing them to deal with all facets of design problems at a scale above that of the project in a comprehensive manner. What is happening, it seems is that a student first acquires a

speciality in undergraduate training and then proceeds to graduate work (i.e. city planning, urban design) to broaden his approach to the design of the urban environment. This author believes that maybe the reverse should be attempted - a general approach in urban design first and then a speciality. Such a procedure might ensure a more open-minded student and practitioner.

Admission Policy

Working at such broad and varying scope and complexities that the definition of urban design implies, the selected schools believe that the prospective candidate should have a broad background of training and hopefully some experience. Since the programs are at the graduate level, prior academic achievement is expected.[66] Although there is some flexibility, all schools require a Bachelor of Architecture degree (currently a 5-year program in most schools) or its equivalent and a high degree of design ability. In addition, the University of Pennsylvania requires that prospective students have an introductory course in economics.

While the two-year programs at Cornell and the University of Pennsylvania are primarily exclusive for students with architectural backgrounds (Penn will consider candidates in other backgrounds, but he must be on equal footing with an architectural graduate in design ability and training),Harvard allows city planning and landscape archi-tects who have design backgrounds, admission to its one-year program and awards them the Master of Urban Design in the appropriate field upon completion of the course requirements.

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[66]For a resume of each school's admission and degree requirements and program outlines see Appendix, pp. 94-99.

An unique aspect of Pennsylvania's program is that, upon completion, the graduate is awarded the degree of Master of Architecture and Master of City Planning. Upon completion of a third year, which normally fulfills the course requirements for the doctoral degree, he is awarded a certificate in civic design.[67]

Of interest is that M.I.T.'s urban design program, in the Department of City Planning, is not limited to students with architectural backgrounds. This underlines the faculty's philosophy that urban design is city planning with the visual component considered as another aspect of comprehensive planning. Admission policy does require that prospective students have "design ability", however, there are and have been students in this program lacking prior five-year design training and who possess formal training in disciplines other than architecture or landscape architecture.

Since design ability plays such an important part in the admission of students to the urban design programs at the selected schools, questions were addressed to the various faculty members who examine student applications concerning their rational evaluation of "highly talented designers" whose backgrounds and training could vary so widely (all schools visited had at least a five-to-one ratio of applications to space available for the coming academic year; many of these applications were from foreign students). As expected, no one could point to a completely rational method for evaluating design ability. Great stress is laid upon a student's academic design record,

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[67]Bulletin, Graduate School of Fine Arts, University of Pennsylvania, Philadelphia, December 1964, p. 27

his letters of recommendation and his graphic submission of previous work. While it behooves a student to draw well and submit only his best work, nevertheless, some faculty members emphasized that they would rather see a somewhat dull submission in lieu of a highly articulated one, so long as the work was orderly and displayed a talent for grappling with a problem in a creative method even though it did not quite come off in the final presentation. Strictly taboo, would be a display of the latest form gimicks, etc. that seemingly have no relationship or relevance to the problem presented, no matter how facile the author may be. In this context, a house or small project well conceived may be more acceptable than a grandiose scheme for a center of a community. The student's winning of a major architectural competition would certainly be a help in gaining him admission to the program of his choice.

The following brief description of program orientation and curricula at the selected schools gives some indication of the trend and method for training urban designers.

HARVARD UNIVERSITY

Clearly stated in the Official Register, are the objectives of the Harvard Graduate School of Design and the Urban Design program:

"The problems resulting from the dramatic urbanization pressures of recent years throughout the world have made it urgent to train men to grapple with large scale design problems, which require the combined skills of the planning and design fields. . .the professions of architecture, landscape architecture, city planning, regional planning, and urban design. . .have spheres of activity that tend to merge as they expand because they deal with different aspects of something basically an entity: man's environment in all its dimensions. To understand it better - and to enhance its positive qualities by continuous process of giving form - is the aim toward which education in the Graduate School of Design is directed."

The urban design program objective:

"It is not the intent of the [urban design] program to make an architect or landscape architect a planner or vice versa [rather] studies that bridge the professions are undertaken. . . [The objective is] to encourage consideration of design at its broadest scale, but particular emphasis is given to urban expression dealing on one hand with technological needs of mobility and communication and with human scale and liveability on the other."[68]

The core of Harvard's urban design program centers around the studio and a seminar each term. In addition, two one-term elective courses are required before the faculty will recommend a student for the appropriate master's degree (based upon his prior professional degree) in urban design.

To achieve their previously stated objectives, the studio has, generally, two long problems during the year: one on more or less a downtown urban renewal scale, the other tackling new development. In addition, there are some short sketch problems, particularly an opening problem dealing with some area well known to the individual student. Such a problem gives the faculty an opportunity to size up each student's interests and capabilities.

In previous years, for example, the subjects for the studio problems have been the Charles River Basin in Boston, a new community on an actual site along one of the corridors of the Washington 2000 plan or an abstract flat terrain but within the geographic and climatic conditions of a specific region.[69]

This year's studio problems delt with other project areas within

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[68]Official Register of Harvard University, Graduate School of Design, Vol. LXI, No. 27, (October 1964), p. 10.

[69]J. Tyrwhitt, "Education for Urban Design," AIAJ (December 1962)p.101.

the Boston area and development of a segment of a new industrial city in a developing country in the tropics.

The Fall studio accepted the Boston Redevelopment Authority's program for the Fort Point Channel area and the Prudential-Fenway area. The two programs allowed two alternative approaches; complete clearance and a fresh start approach (the Fort Point problem) or the interweaving and selected clearance approach (Prudential-Fenway area). Both problems were based on the preface that:

> "Urban renewal and urban redevelopment are today the most effective tools for improving the efficiency and appearance of American cities. The urban designer must play an important role in this effort. . . ."[70]

As one might expect, according to Professor Von Moltke in an interview with the author, the majority of the students favored the Fort Point problem since it allowed total clearance and a fresh start.

The faculty's tasks fall into three categories: the provision and source of information, a constant reminder that the designs have to be realizable in stages and by different people, and a continual reference back to the macrocosm, the microcosm and the reality - in other words the system, the building types and the special problems of the site.[71]

The students executed the Fall term problems in both graphic and model form. Plans were drawn at a scale of 1/32 of an inch equals one foot and models were at a scale of one inch equals one hundred feet (this scale resulted in models being approximately six to eight feet

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[70]W. Von Moltke, "Redevelopment of the Fort Point Channel and Prudential-Fenway Areas in Boston," Urban Design Studio 2-5ab, Harvard Graduate School of Design, Cambridge, Fall 1964, p. 1. (unpublished student problem; mimeographed).

[71]J. Tyrwhitt, op.cit., p. 101.

square) in order to display their proposals. Although some attention

was given to staging strategy, the models and drawings represented the

completed entity. Whereas form considerations were important, a great

deal of time (rightfully, according to the students) was spent in

solving circulation from the city to the project, to and through the

various buildings. Recording the existing physical character of the

environment during the early stages of the problem was mainly accom-

plished by photographs accompanied with a site plan noting where each

photograph was taken. Photographic techniques were used to some

extent in the final presentation (eye level view of buildings), however,

the traditional methods of elevation, perspective and of course the

model were primarily employed for conveying the design intent.

The current Spring term project was, at the time the interview was

made, not far enough along to fully appreciate its various aspects,

however, in examining a segment of a new industrial city in the

tropics, the students were asked to develop criteria effecting design.

While such a task could have gone a number of different ways, it seemed

to degenerate into site, space and climate criteria and requirements

heavily favoring a developed rather than a developing country's demands.

Except for this part of the term's problem, there did not appear

to be any research, as such, being accomplished on other aspects of

urban design problems. The development of prototypes for a specific

economic, human and geographic condition (the second stage of the Spring

term), however, may lead into some very interesting research problems

which could be carried further by the students after they leave Harvard

(the program, it must be remembered, is only one year). It is the

faculty's hope that the results of this Spring term's workshop will

merit publication.

According to Professor Von Moltke, the program is constantly being evaluated, by both faculty and students, in order to be more effective in dealing with the problems of urban design. Although he has only recently been made Director of the program, he already has some changes in mind. One primary concern is the fact that of the forty-odd degrees conferred since the program was started in 1960-61, all have been Master of Architecture in Urban Design except one (M.C.P. in Urban Design). In a program which stresses interaction between the three professions, Professor Von Moltke, believes a stronger effort should be made to induce students with city planning and landscape architectural backgrounds into the program. One might suggest that collaborative studios with the other disciplines would solve the problem, however, it was partly as a result of the inadequacy of collaboratives that the Harvard urban design professional studio came into being![72]

Another change in the program that should be studied according to Von Moltke, would be including coursework in economics and sociology. Since most architecturally oriented students had little or no experience in these subjects academically, he feels this is also an urgent matter. To accommodate these additional subjects, he would extend the program by an additional year. Curiously enough the students agree two-to-one with him on this point.

Concerning the studio and the problems assigned, he is not without suggestions as to how or what should be changed. He and the students alike agree that the Fall problem (Fort Point Channel; Prudential-

[72]Ibid.

63

Fenway) was too "architectural" in scope. The students were not happy
to accept the Boston Redevelopment Authority's program, indeed, they
would have liked to ask the question, "Should the proposed facilities
be located here in the first place?". In other words, they see the
program and policy statement as a "design" just as much as is its
solution in three-dimensional terms. The students revealed, in their
interview, that they believe Urban Design should be dealing with
aesthetics primarily at the metropolitan and city scale, thus it is
easy to understand their hesitancy to work within such a tightly
defined program with no opportunity to question its validity. They
hope that the Spring term problem will give them the freedom they
desire.

While it is helpful to have current student and staff comments
(the staff have backgrounds and trainings in primarily architecture),
Von Moltke hoped that comments from the graduates of the program would
eventually get back to the staff. At the moment this is on a very
informal basis and no formal contact from the school to the graduates
(via a newsletter, etc.) is maintained. Since the program is only
5 years old with forty-odd graduates, he believes that it is too early
to evaluate the effectiveness of the graduates in the field. The
average age (27½ years) of the students and their limited practical
training (less than one year since receiving their first professional
degree) limits somewhat their filling of key decision-making positions.[73]
Although no formal contact is maintained with past graduates, their

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[73]The age and experience statistics pertains to the 1964-65 class.
It is believed that this class is typical based upon an interview with
the secretary for admissions.   .

whereabouts could be traced. The author was successful in locating current addresses for 40 out of 41 of the graduates in the alumni office. Twenty-two (54%) of the graduates are in foreign countries with nine (22%) located in Boston. Of those graduates* address cards located (which also included their current professional status) all, except three, were in architecture.

In seeking out positions upon graduation where the graduate might be most effective, Von Moltke suggested Civil Service. He bases this opinion on the belief that the Federal Government is and will continue to play an increasingly strong role in shaping the urban environment. No other agency has the power or the money to do the job. Of interest, the students noted that they believed the Urban Designer would be most effective in a redevelopment authority, city planning commission, or consulting office in that order.

In summary, Harvard's program is based on the attitude that urban design is a bridge between the three professions of architecture, city planning and landscape architecture with the objective of encouraging design at its broadest scale in order to achieve the goal of an ideal master form which can move into ever new states of equilibrium and yet maintain visual consistency and a sense of order in the long run. Yet, there appears to be some difference between what is preached and what is actually practiced in the program. Although professing a concern for a "master form and program" which can grow and change over time and is imageable and aesthetically pleasing to the observer, the actual projects undertaken are limited to a particular section of the urban environment (C.B.D., waterfront, etc.) and are highly reminiscent of typical architectural problems with the solutions being articulated

in a similar manner. Collaboration between the students of the different design professions appears not to exist and faculty collaboration in framing student problems is believed to be in a similar state. The fact that students admitted to the program are primarily architects reinforces both of these situations: the urban design students have little in common - both in background and subject matter - with the other students, and the faculty are not overly concerned with collaboration on student problems since the program is structured at the moment in such a highly architectural fashion. Fortunately, the urban design faculty (and students) recognize these facts and are hopeful that by extending the program an additional year and introducing a more broadening curricula they will be able to reverse the current trend of the program.

Because of the one-year time constraint, there is little time for the students to go into any great depth to do research on any one problem since they are working simultaneously on the total continuum between the project and the regional scale. The value of the course, according to one student, is "that at least we are thinking about the many problems involved in Urban Design, even if we don't have all the answers".

Comments from the graduates regarding the program are not forthcoming since no formal effort is made by the School to contact them. Current addresses (available at the University Alumni Office) reveal that approximately half of the graduates are in foreign countries and approximately one-quarter of them are in the Boston area; all except three are in architecture. Because of their age, the faculty believes that the majority have not reached key decision-making positions in

66

the field.

Before proceeding further, the author believes that the landscape program at Harvard should receive some mention because of its orientation, objectives, and the type of work being done by the students. The faculty suggests that the principles involved in landscape architecture are similar to those of architecture, however, the architect is concerned primarily with indoor space and buildings while the landscape architect concerns himself with the outdoor space and works with a less rigid spatial development. The differences between the two professions then is scale, techniques, materials, methods, and to some degree function.

The students interpret (1) the urban designer as a super-architect who deals primarily with groups of buildings rather than one building and (2) the city planner as setting the stage (analysis, administration, etc.) for the urban environment at varying scope. The job of the landscape architect is to be concerned with:

> ". . .the arrangement of land, together with the spaces and objects upon it, for safe, efficient, healthful, pleasant human use. Site and situation, together with social requirements, constitute the basis for all landscape architectural design."[74]

The type of problems given to the students vary in scope from small site plans of areas within the community or, college campuses to regional considerations such as a recreational system, etc. An interesting problem executed during the Fall 1964 term was locating a highway system in the Merrimack Valley which would take advantage of

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[74]Official Register of Harvard University, Graduate School of Design,"Objectives:Landscape Architecture", Cambridge (October 1964),p.43.

and expose to view many of the man-made and natural elements. Of concern

was exposing elements of the typical New England town, etc. which are

represented in this region in addition to the region's unique character-

istics. Criteria for judging the character of the total road as one

sequence was not undertaken.

Analytical and presentation techniques which have been and are

continuing to be utilized are the traditional techniques of models,

photographs and perspectives as well as the notation symbols and classi-

fication developed by Kevin Lynch.[75]

UNIVERSITY OF PENNSYLVANIA

Dean Perkins relates that:

"Our concern is architecture. Specialization has no interest
except as it bolsters the concept of total architecture."[76]

The Official Bulletin goes on to add that:

". . .the increasing tempo of urban expansion and rebuilding
requires the architect to have a broader and deeper understanding
of the forces which shape our cities. It is clear from even the
most cursory observation of blight, which has overtaken so large
a part of our cities, that a humanization of our urban environ-
ment is long overdue. The architect and the landscape architect
are today being challenged to create a new kind of urban space
which is a true expression of contemporary society wherein
planning for continuity and change is needed. The departments
of architecture, city planning and landscape architecture have
therefore joined in offering a program in civic design, since
improvement of the quality of the urban environment is properly
within the province of all three professions."[77]

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[75]K. Lynch, The Image of the City, Cambridge: the M.I.T. and
Harvard Presses, 1960, pp. 46-90 and 145.

[76]G. H. Perkins, "Graduate Programs: The University of Pennsylvania,"
AIAJ, (September 1964), p. 105.

[77]University of Pennsylvania Bulletin, Graduate School of Fine Arts,
Vol. LXV, No. 3, December, 1964, p. 11.

The objective of the program:

> ". . .the program concentrates on the creation of three-dimensional forms of the urban environment which are true expressions of the continually changing community."[78]

Dean Perkins suggests that the two-year program builds upon the strength of the student architect, rather than trying to change his discipline, however, because of his coursework in city planning he is a trained city planner, thus he is eligible for two degrees - the Master of Architecture and Master of City Planning - upon graduation. The student, according to Dean Perkins, will, in these two years, devote about half of his time to the studio and half to basic courses in city planning theory, analysis, the structure of the community, history of city growth, transportation, housing, community facilities, planning administration, land economics and finance. In attendance too, in some of these courses, are students in the landscape curricula.

The separation of students, according to the baccalaureate degree they are seeking, occurs in the studio. However, a thesis is not required for a Masters degree in any department of the school, thus a collaborative problem is offered to bring the students from the various disciplines together. Since great freedom of course selection is given each student in the three masters degree programs, very few have identical schedules.

Nevertheless, according to David Crane, there is a possibility of curtailing the civic design students from taking a studio with Professor Kahn's Master's of Architecture class. Apparently it was announced at the beginning of the Fall 1964 term that civic design

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[78]Ibid., p. 21.

candidates would not be permitted to take Kahn's studio, but the result-
ing upheaval by the students forced the faculty to re-examine their
decision and permit half of the class to take the studio in the Fall
and the other half to take it in the Spring.

Associate Professor Crane, on temporary leave of absence, hopes
that upon his return to his teaching duties that he will be able to
work with the civic design students for a full four terms. A quick
sketch of a four-term course would consist of (1) developing a program
and a typical element of a community of at least 500,000 inhabitants
the first term, (2) doing a couple of short six week's problems during
the second term on a typical system such as playgrounds, etc. and then
concluding with a problem dealing with a unique place such as a public
square, etc., (3) working on a problem encompassing the central
business district during the third term and (4) concluding in the
fourth term with a system design such as transportation.

Until Crane returns, the students are being circulated throughout
the various studio offerings with the objective of not having the same
critic in charge of the same studio during any of their four terms.

While this in itself might foster collaboration, a more stronger
method, at least to this author, was in the framing of the student
studio problems. This Spring, for example, the second year studio in
city planning (with a couple of civic design students enrolled in the
studio) is undertaking a metropolitan study with the aim of exploring
and expanding an approach to metropolitan planning that has been
formulated by various faculty members in the three departments.[79]

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[79] D. Wallace, "A New Approach to Metropolitan Planning Applied to
the Greater Wilmington Area," C.P. 801, Graduate School of Fine Arts,
University of Pennsylvania, Philadelphia, Spring 1965.

Concomitant with this studio, the first year civic design studio, under the direction of Professor Geddes is studying the city of Newark and the University of Delaware, which are part of the Greater Wilmington area. The purpose of this studio is to deal with:

> ". . .the nature of education, of student and faculty life and life in a university town and the relations of these to each other and to contemporary society."[80]

and what effect these conditions will have on the form of the city and the university in the future. Upon completion of a staged general plan, the students will proceed with a more detailed plan for the university.

The points to be made here are that: (1) the faculties from all three departments are working together in framing student problems, (2) the studios are tied together to some extent by these problems, (3) city planning as well as architecture considerations are simultaneously being applied, and (4) the students as well as the faculty of the three departments attend (mandatory on the part of the students) the various departmental juries. The strong point about the University of Pennsylvania, according to the student comments, is that they do mix with other students, yet being mixed with other students is the most frustrating part of the program. One might hypothesize that introducing Crane's restricted four-term studio program into the civic design program might relieve some of the students' frustrations but it might also destroy some of the successful collaboration that seems to exist in the School at the moment. Destroying collaboration between students

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[80]R. Geddes, "The Form of a University," Civic Design Studio P.L. 603, The Graduate School of Fine Arts, University of Pennsylvania, Philadelphia, June 18, 1965.

and faculty in various disciplines would appear to be a paramount mistake to a program such as civic or urban design where the student is trying to gain an understanding of the nature of the environment, and his success will be judged on his competence in various skills which embrace all design fields rather than just one.

For those students desiring work in computer programming, Professor Britton Harris is for the first time offering such a course. It will be interesting to follow the influence of this course in the civic design program since Professor Harris believes:

> ". . .that within a few years a planning graduate who does not have some command over these tools[computer and simulation models] will be relatively unqualified and disadvantaged in his future professional career."[81]

In presenting these various studio projects, the students are asked to search out new and more adequate techniques for communicating their intent to the professional as well as the layman.

In Professor Geddes's class this term, various hypotheses concerning the problem, data collection and design intent were expected by the mid-term jury. The techniques used to present the material consisted of maps, ranging from one inch equals four hundred feet (1" = 400'), in addition to portraying, diagramatically, a green-way system (one element of Crane's "capital webb" concept), directions of future development "thrusts", and staging strategy over the planning period, in considering the staged development of Newark and the University of Delaware over the planning period. A liberal use of typewritten

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[81]A letter from Professor Britton Harris to Professor Gerald Hodge of the University of Toronto, March 1, 1965.

material to cover the survey data (social, economic, and visual surveys) was evident. Although the typewritten material appeared to be comprehensive in subject matter covered, no summation of the material was evident which noted the assets and liabilities of the area under study. Throughout the jury, which this author attended, it was evident that such a summation would have been helpful in clarifying the intent of each student's solution.

Since a thesis is not required in any of the master's programs, independent research on a particular problem of urban design would depend, the author suspects, on the motivation of the student to elect such a program or else remain for a doctoral degree in the various fields. Apparently the first doctoral degrees in architecture will be awarded in the next couple of years; as yet very few, if any, of the current students are willing to stay a third year for the certificate in civic design. If there was any research on the visual form problems of the urban environment, this author was not privileged to see them. It is known that Edmund Bacon is working on a book on civic design supported by a Rockefeller grant.

Although the civic design program has been in existence for almost a decade, little formal contact is maintained with the graduates. Dean Perkins attributes this to the fact that "so many of our graduates receive Fullbrights, etc. upon graduation that we don't know where they are." Since most of the students are Americans rather than foreign,[82] the first graduates, even though they did matriculate to foreign

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[82]Although not a policy, the School in general, according to Dean Perkins, maintains a ratio of about three Americans to one foreign student.

countries for a short term study, should begin to fill key positions
in the United States if this year's class can be taken as the average
age of a typical student (27). This would seem to be an unique
advantage which other schools do not have; not only in placing graduates
but also in evaluating the effectiveness of the program.

Professor Crane believes that the graduates of the program would
be most effective in top design positions of public agencies or private
consulting firms of architects and planners.

Evaluating the program depends largely on the faculty and to
guide them, Dean Perkins states that:

> ". . .the spirit of experiment guides both the educational
> offerings. . .Courses often bearing the same old names, have
> changed almost beyond recognition in the past decade. The
> only constants may be a dual dedication to an architecture
> concerned with the totality of the man-made environment and
> to a conviction that the maintenance of the highest standards
> of service and achievement requires untiring re-examination
> of our goals, our values and our educational methods. . . ."[83]

In summary, the University of Pennsylvania's concern is for archi-
tecture. The aim of the civic design program is to provide an
opportunity for the architecturally trained individual to concentrate
on the design of three-dimensional forms at a varying scope and scale
which are true expressions of the changing community by both inter-
preting and integrating visual form matters with planning decisions.
(Concern for untrained observer perception of these forms is not
explicitly stated nor was it evident in the work of the students.)
To this end the architect must have an understanding of city planning
(in addition to an appreciation for landscape architecture), therefore,

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[83]G. H. Perkins, "Graduate Programs: The University of Pennsylvania,"
AIAJ, (September 1964), p. 105.

his coursework is so arranged that upon completion of his two years of study he has met the School's requirements for both the M.C.P. and M. Arch. degrees. While he has received cross-training, nevertheless, he is not a "gap-filler" but an architect; he is more than an architect rather than more of an architect. (Time did not permit the author to examine the University's alumni records to determine where the graduates are at the present time or to find out how many have become city planners rather than architects.)

While the student spends about one half of his time with city planning subjects, the other half is spent in four one-term workshops. Although each student can elect his own program to suit his needs, it appears that the students remain together during the first two studio terms and then branch off either into Kahn's studio and a city planning studio, or vice versa, in the final year. The faculty, at the moment, believe that students should have exposure to various faculty members and studios, therefore, students are rotated so as to prevent the student from having the same studio instructor during any of their four terms in residence. This procedure, in addition to jointly framing and coordinating of student problems by faculty members in the various departments, helps foster collaboration. Of the schools visited, the collaborative efforts made by both the faculty and students at the University of Pennsylvania seems to be working the best. This could change in the future, however, depending upon how rigidly Associate Professor Daivd Crane, upon his return (full-time) to the School, structures his four-term studio problems. Destroying collaboration would seem, to this author, to be a paramount mistake for a program which is seeking to train individuals as multi-specialists rather than a

75

specialist in one, or a generalist in all fields.

Omitting the thesis requirement leaves the opportunity for independent research primarily up to the student to elect such a program sometime during his two years, or proceed on to become a doctoral candidate. The current students in the civic design program do not seem to be too enthusiastic to proceed on with an additional year which would require a thesis and demonstrate his ability to do independent research.

Although the civic design program has been in effect for almost a decade, little effort has been made formally to track down the graduates, who, in turn, might be of some value to the program.

Evaluation of the program is left primarily to the faculty who let the "spirit of experiment guide the educational offerings."

CORNELL UNIVERSITY

"Urban Design" at Cornell, according to the catalog:

". . .is an inter-integrated field concerned with the solution
in architectural terms of the developments proposed by city
and regional planning."

The intent of the program:

". . .the program of study includes an interpretation of such
course material from architecture and planning as will equip
the student with an adequate conceptual framework for practice,
and it is particularly concerned with the three-dimensional
definition of the urban environment in terms which give
significance to the individual."[84]

Cornell's program, attached to the Department of Architecture and less than two years old, developed primarily out of Associate Professor Colin Rowe's attitude that his Master's of Architecture students were

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[84]Cornell University Announcements, College of Architecture, Vol.
56, No. 9, October 6, 1964, p. 8.

"too object oriented." He wished to make them more "space conscious," to be concerned with the spaces between buildings than just the buildings themselves. Unless he could broaden the scope of his graduate program, he believed that the students were missing and neglecting a vital concern of architecture. The Department of City and Regional Planning was also interested in such a program since a number of their students were seeking coursework in this area. In essence, the program was thought of by the planning department as a "gap filler" between architecture and planning, however, the architectural department thought of the program as an extension in the scope of architecture from the project to a section of the city (neighborhood, C.B.D., shopping center, etc.). Since the degree conferred is a Master of Architecture in the field of Urban Design, the viewpoint of the architectural department remains the guiding force of the program. To help effectuate a stronger link between the two departments in administering this program, Associate Professor Stuart Stein in the City Planning Department, who possesses degrees in both architecture and city planning from M.I.T., holds a joint staff appointment.

The student spends the major portion of his time in the studio with the remainder divided among coursework in both city planning and architecture such as theory of urban design, principles of city and regional planning, history of architecture and city planning, urban ecology and urban renewal.

An unique aspect of the program is the requirement for the student to take coursework in perceptual psychology. According to a comment by one of the faculty members in the city planning department, this subject has lead to some very interesting student papers and seems to

77

have the desired broadening effect. It has yet to appear, in any force-

ful way, in the solution of student design problems. Perhaps this is

due to the fact that the design staff members have not had formal train-

ing in this field and, therefore, are unaware of its implications upon

the urban form.

The studio problems are framed primarily by the urban design

faculty in a highly architectural fashion. The current term's problem

is dealing with the renewal of a central business district.[85] The

student handout indicates that the reports on parking, housing,

structural obsolescence, etc. had already been done, a master plan

exists for the area, and that the student should think of himself as an

urban designer invited to develop one portion of the larger project.

The program concludes that the urban designer must review decisions that

have already been made, must know what the planners have designated as

the best use of the land and the best function of the areas in the

immediate surroundings, must be familiar with codes, setbacks, etc.,

and must give his attention to materials, colors, textures, lighting,

etc.

Execution of this problem by the students, if it follows a

similar trend as the first semester, will be the typical plans,

sections and elevations and a small mass model of the area under study.

The results of the first term's work indicated a concern for total

rehabilitation immediately rather than a staged project with alterna-

tive proposals at different points in time (the first term's project

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[85]C. Rowe, "A Government Center," Urban Design Studio College of
Architecture, Cornell University, Ithaca, New York, Spring 1965.

involved another C.B.D. renewal project). A great deal of emphasis was placed upon achieving axial arrangements of spaces, buildings and views and a rather arbitrary land use arrangement in order to secure these relationships. Appreciation for buildings already in existence is stressed, resulting, one suspects, out of the Jones-Jacobs "design through conservation" approach.[86]

Because of the highly architectural orientation of the program, the city planning staff have somewhat retreated from the scene and have introduced some urban design subject matters into their M.C.P. program. Of interest this term is the work of Associate Professor Stein in using both the Lynch[87] and Jones-Jacobs[88] approaches to analyze, visually, the city of Ithaca. The students, all non-designers, were divided into four teams and proceeded with what they thought would be a wasted effort on a town that had nothing visually to offer or was worth preserving. Although they relied primarily on color slides rather than graphic techniques and their visual form drawings were in reality land use maps, the students found, to their surprise, that Ithaca does have latent visual features and amenities that could be incorporated into their plans. The faculty is hopeful that the students will use the remainder of the term to deal with these new-found assets, in addition to the normal land use problems of circulation, etc.

Evaluating a new program is difficult, however, Dean Kelly is

[86] B. Jones and S. Jacobs, "City Design through Conservation," University of California, unpublished memo, 1960.

[87] K. Lynch, The Image of the City, Cambridge: the M.I.T. and Harvard Presses, 1960, pp. 140-159.

[88] B. Jones and S. Jacobs, op.cit.

hopeful that a stronger tie between the city planning and architectural staff will develop as this course continues to mature. Both approaches, the "sculptural" approach with its soaring verticals and connecting horizontals and the "high level perceptual awareness" approach (referring, the author believes, to M.I.T.'s approach), seem to be valid at the moment. He would not want to pre-empt one for the other at the moment since so little is known about urban design. "Both of these approaches," he believes, "can be questioned, but hopefully, we will learn more about urban design as we proceed in experimentation."

Although the department has yet to confer degrees on students who have completed the full two-years curriculum, nevertheless, contact is made with their graduates of the city planning program via an annual newsletter. Judging from the contact of the newsletter, one can quickly see where the various graduates are located and what they are doing. The faculty have indicated "letters of suggestions" do in fact drift back to the departments concerning coursework, etc.

In summary, Cornell's program represents an extension of the scope of architecture from the project to a section of the city. It was conceived primarily to acquaint the students with spaces rather than objects. Highly architectural, the planning department has retreated somewhat and is tending to deal with urban design as a part of planning, rather than an extension of architecture - to be done after the planning decisions have been made. In many respects, the present urban design curricula are manipulating forms for form's sake rather than as an integrated element of the total environment.

Since the program is less than two years old, with no graduates as yet, it is impossible to judge the effectiveness of the program "on the

firing line" of professional practice. Maintaining a connection, via the newsletter, with the graduates may be a worthwhile endeavor and act as a catalyst in drawing the two departments together since the feedback from the graduates might indicate that more planning oriented subjects should be included in the program. On the other hand, should all the graduates end up in architectural offices doing limited scope problems, their comments may confirm the existing architectural approach.

Section V

CONCLUSIONS

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CONCLUSIONS

Scope and Objectives of Urban Design

The rise of urban design can be attributed to a wide variety of factors, many occurring within this century. It is in the summation of these various factors, attitudes toward the visual form of the city and its design, redefinition of the traditional professions and recognition of new fields which are also dealing with the form of the urban environment that urban design comes to life.

While there are many definitions of urban design, according to the above mentioned factors, there seems to be a consensus, not only among professionals but also among the schools interviewed during the course of this study, that urban design is (1) dealing primarily with the visual form and its design of the urban environment, (2) over a varying time period. There is less agreement on the points of (1) its position and relationship with other professions (i.e. city planning, architecture, psychology, etc.), (2) scope (i.e. a limited rather than total scope) and (3) whether or not urban design is a bona fide professional field.

The faculty of the various schools indicate a general dissatisfaction with the term civic or urban design, since the terms do not, in their opinion, convey the true intent or meaning of the term.

A more comprehensive definition which would, it is believed, fulfill the qualifications placed on urban design by the faculties of the three schools would be one in which (1) urban design's unique reason

for being (i.e. concern for and design of the visual form) as well as a method of practice would be identified, (2) the varying scope and time constraints would be recognized as well as (3) the recognition of other fields and professions which also have a concern for the urban environment. When considered in this context, urban design differs from the other professions in the sense that it is on the threshold of all rather than owing its allegiance to one.

Role of Urban Design

Delineating the scope and objectives points up the deficiencies in various professional fields to deal with the visual form of the urban environment at a scale larger than a project or neighborhood. Although there are conflicting beliefs as to whether or not urban design is or should be considered a bona fide field of endeavor rather than an extension or speciality of an already existing profession (eg. architecture, city planning), the faculty members at the selected schools and noted practitioners in the various traditional fields have assigned to the Urban Designer a multi-functional role of either interpreting or integrating (or both) planning decisions with visual form matters varying in scope from the project to the metropolitan level of the urban environment.

It is generally agreed that he should be a competent three-dimensional designer in addition to possessing more than a superficial knowledge of the social, economic, cultural and scientific aspects of the urban environment and how they interact and impinge upon the visual form of that environment.

His skills would include the ability (1) to understand the nature of the environment and the system within which he is working; (2) to

integrate visual matters with social and economic considerations, (3) to recommend alterations of the artifacts of the urban environment and trace their implications in all dimensions, (4) to work out a design system that interprets planning policies in terms of design that can be understood and acted upon by decision-makers and carried out by other design professionals (5) to educate the laymen as well as other professionals as to how three-dimensional design can further the goals to be achieved, and (6) to articulate verbally, orally and graphically design proposals.

Although his skills indicate a "broad scope" approach to his task, there are some who believe that one reason for the failings of urban design today is that traditional techniques, applicable to only limited scope problems, are being utilized in executing these skills.

Evaluation and Practice of Urban Design

The extent to which he succeeds in all rather than any one is the measure of his competence.

Measuring his success in visual form matters is, at the moment, largely intuitive. There is a lacking of both visual objectives and various inter-related sets of explicit, operational criteria arranged in a hierarchical order which have neither the consensus of the professionals nor the laymen.

Urban design, when considered in its full context, may be a new professional field with few individuals actually skilled in its art and even less evidence of actual accomplishments. Consequently, the abilities and skills of the urban designer are being evaluated on past performance and accomplishments and at a smaller scope than the total environment in other professions. While this seems to be the only

84

alternative at the moment, nevertheless, such evaluation continues to perpetuate traditional techniques and old theories in dealing with contemporary problems (or opportunities - to state it in a more positive way).

Formulating workable methods for evaluating urban design and urban designers would be helpful in resolving the issues concerning the practice of urban design. Explicit and operational objectives and criteria are mandatory if urban design is going to be practiced openly, on a democratic process, like city planning rather than relying more heavily on a sophisticated group or one person to make decisions concerning matters of visual form. At the moment no one alternative along the continuum between the democratic process at one end and the one man - one decision at the other satisfies all situations or is mutually exclusive of the other alternatives. While this allows flexibility, depending upon the magnitude of the problem, all are open to question as to resulting quality of the physical and visual form. Only a set of explicit objectives with operational criteria arranged in a hierarchical order will alleviate many of these problems and point the way to a consensus concerning matters of visual form.

Training the Urban Designer

The reasons for establishing academic programs at the three schools, this author concludes, were based upon (1) their beliefs that a gap exists between the various professions (Harvard) or that the schools concern was for extending the profession of architecture (Pennsylvania and Cornell), (2) their definition and interpretation of the term "urban design" and the role of the urban designer, and (3) their attitudes toward the urban environment which fall along the continuum

85

of the polarities hypothesized. It should be quickly stated, that no

hierarchical arrangement of the three previously mentioned items was

detected; each is inter-related with the other and together they form

the basis for the objectives and content of the various academic

programs. It appears that this is a "which came first, the chicken or

the egg?" situation.

Attitudes Toward the Form of the Urban Environment

Based upon the author's visit and interviews at the selected

schools, the following conclusions were reached regarding each school's

attitudes toward shaping the urban environment with respect to the

polarities hypothesized at the beginning of this study.

HARVARD UNIVERSITY

The primary concern for shaping the urban environment is to seek

the unattainable goal of creating an ideal master form which can move

into ever new states of equilibrium and yet maintain visual consistency

and a sense of order in the long run. This form would be a catalyst

for future growth and a structure for channeling the forces that shape

the city which would fulfill not only the technical, but above all the

human needs of the urban environment. Less attention, however, is

given to general planning than to visual form in the studio.

Attaining this goal would embrace all of the polarities hypothe-

sized, taking from each one, more or less, depending upon the situation.

Nevertheless, the author believes that of the attitudes hypothesized,

Harvard's program would (1) favor major surgery of the city rather than

preservation, (2) favor the urban rather than the rural attitude toward

the environment, (3) seek order in the environment yet try to maintain

some richness, (4) promote function above form considerations,

(5) design the urban environment for the people at various scales rather than just the human scale, and (6) emphatically agree that aesthetics is applicable to the total form of the urban environment - not just parts of it.

THE UNIVERSITY OF PENNSYLVANIA

The concern at the University of Pennsylvania is for architecture. Civic design, urban design - regardless of what you call it - is architecture at a greater scale and scope than previously recognized, therefore, the term "super architecture" is appropriate. The program does, nevertheless, give a great deal of consideration to planning.

The author concludes that (1) a middle-of-the-road attitude prevails concerning major surgery and preserving the existing city, (2) an urban rather than a rural atmosphere is desired in the urban environment, (3) order should be brought to the urban environment yet richness should be maintained, (4) function precedes form in the design of the urban environment, (5) the city is designed for people at various scales, and (6) aesthetics is applicable to the total form.

CORNELL UNIVERSITY

The Urban Design program at Cornell lies somewhere between architecture and city planning. The faculty's attitudes toward shaping the urban environment (1) emphasizes design through conservation, yet the renewal of the city center necessitates major surgery, therefore, in the final analysis most of the area should be razed, (2) do emphasize that an urban rather than a rural atmosphere is desired in the urban environment, (3) strongly emphasizes formal plans and geometric design for ordering the urban environment, (4) emphasizes form above function in the design of the urban spaces, (5) suggests grandiose linkages and

87

scales should be achieved within each project rather than quaint and intimate spaces, (6) do suggest that aesthetics is applicable to only parts of the total urban environment rather than the total form.

From the above the author concludes that while the attitudes toward the shaping of the urban environment appear to be similar in the case of the programs at Harvard and the University of Pennsylvania, the fundamental difference lies in the execution of the program; Pennsylvania's program works at a broader scale and is more planning oriented while Harvard's program deals more in project work and less planning oriented. As such, the Harvard program may be a little more willing to take a scalpel to the existing city than would the program at Pennsylvania.

Cornell, on the other hand, differs primarily on a more fundamental basis. The concern for axial relationships and arbitrarily imposing forms on an area to achieve this purpose seems to be the emphasis of their attitude toward the shaping of the urban environment.

Admission Policy

Admittance policy at the three institutions heavily favors students who are architecturally trained: the assumptions being that (1) the architects' design training is the standard by which to evaluate the competence and creative ability of potential urban designers and (2) the urban designer must create three-dimensionally. Although it is generally agreed that the primary function of the urban designer is to work with the visual form of the environment, nevertheless some schools (M.I.T.) are willing to relax somewhat the design requirement in the belief that one who possesses design inclinations, but has a

background in the social sciences, for example, can also make a meaning-
ful contribution to the visual form of the urban environment. It is
concluded that a more liberal viewpoint on the prior training of
prospective students by the faculty of each of the three selected schools
may have a favorable rather than a detrimental effect upon their indi--
vidual programs as they implied in their interviews.

Program

To broaden the architectural student's somewhat limited outlook on
the design of the urban environment, various city planning courses,
which include sociology, economics, etc., are given. In the studios,
the approach to a problem is very similar to that of undergraduate archi-
tectural educations with the traditional architectural methods of
execution being utilized. Only at the University of Pennsylvania, did
the author witness an attempt by the students to graphically illustrate
urban design problems in other fashions besides the typical, precisely
drawn, plans, elevations and sections. The conclusion reached by the
author is that at the moment there is a tendency, to do "site planning"
on the total environment, to precisely fix the form of the urban environ-
ment regardless of the time scale of the problems involved.

Whereas above it was concluded that somewhat different aesthetics
toward the shaping of the urban environment existed at the various
schools, the author believes that little difference exists in the
methods utilized in broadening a strongly oriented architectural design
student. Each school just tacks on city planning courses to achieve
the effect rather than trying to formulate a completely new program or
method of dealing with this subject.

What is probably needed is not the inclusion of city planning

89

courses into highly architecturally oriented programs, but rather a completely new approach to the training of urban designers commencing in the undergraduate rather than the graduate years.

Research

Little research into specific urban design problems appears to be going on within the master's program, except for that which is performed during a studio problem. Harvard and Pennsylvania do not require a thesis; Cornell's thesis topics usually involve another project design problem, of the students own choosing, which take the form of previous studio problems. Although Pennsylvania has a third-year program which would provide an opportunity for independent research (and fulfills in general the coursework for the doctoral degree), few, if any, current students anticipate spending this additional year in school. To this author's knowledge there are no doctoral candidates in urban design at the three schools at this time.

Evaluation of Program

Evaluation of each program is left primarily up to faculty who use "the spirit of experiment to guide the educational offerings". Because of the newness of the programs, the Schools believe that few graduates are in a position to help guide the faculties in evaluating this coursework. Those few graduates who are in the field, however, are not formally contacted (via a newsletter, etc.) and correspondence is left up to each individual's initiative. It is the conclusion of this author that formal contact between graduates and their respective schools plus contact with all schools is badly needed not only to make suggestions concerning new methods and techniques which could be used in the classroom but might also have relevance to problems in the field. More often

than not, the material that is finally published in the professional journals or magazines is out of date. What is needed is an up-to-date, one or two-page bulletin which could be cheaply and quickly produced to disseminate relevant information to the graduates and vice versa.

Jobs Filled by Graduates

Since no formal contact is maintained, each school's faculty is unsure as to what positions their graduates are currently filling. Dean Perkins at the University of Pennsylvania believes that a large part of the recent graduates from this school are in foreign countries on scholarships, etc.; some are in planning or redevelopment offices and a large majority are in architectural offices. Cornell has no graduates from its currently organized, two-year program. The author in tracing the graduates at Harvard (utilizing the Alumni Office which maintains not only current addresses but also professional status) found that all, except three, are in architecture and approximately 50% are residing outside the United States.

Recommendations for Further Study

All aspects of urban design are open for further study at this moment. Further clarification of the scope and role of the urban designer in today's society, in addition to a search for new methods and techniques for practicing as well as training individuals are urgently needed as this area develops and matures. Breakthroughs in any one of these study subjects could completely reorient many, if not all, present academic programs and acknowledge urban design as a profession. Poverty of ideas and lack of knowledge concerning the analysis, designing and synthesizing and testing of the perceptual elements which compose the urban environment and the visual goals and

objectives of society are the main inhibitors. The lack of a process

for satisfactorily integrating all factors into a comprehensive design

further complicates the matter. In this context, one might truely ask

"should only a creative three-dimensional designer be allowed admit-

tance into academic urban design programs?"

1. As yet there is no consensus as to what is wanted, visually, at

various scales in the urban environment nor how to measure these objec-

tives should they be formulated. Just searching for these objectives

and criteria may reorient many academic programs, not only in urban

design but also in the other related fields. Topics such as: (1) the

effect of the perceptual elements on people of various socio-economic

levels, and cultural backgrounds, (2) what visual forms are highly

significant to people of varying backgrounds and socio-economic levels;

are these applicable to formulating visual objectives which can be used

for designing the city, (3) how should a layman or a professional be

educated concerning matters of visual form, and (4) how can the city be

used as an educational device, are only some of the researchable

topics which need investigation.

2. The urban designer is being trained to deal with contemporary urban

form problems of varying scope, yet he is utilizing traditional

methods for the most part to solve these problems. Possibly the tradi-

tional tools are satisfactory, yet someone might take time out to fully

examine this topic. There are some who believe that the failing of

urban design and designers today is that they are utilizing traditional

methods which are applicable only to limited scope problems, rather

than to total scope contemporary urban design problems. Some effort

directed toward quick, cheap, and accurate methods for recording,

92

analyzing and designing the urban environment visually as well as comprehensively would be in order.

3. Finally, if urban design is not a profession but rather an area or field interacting with all professions, then closer collaboration - both academically and professionally - must be accomplished. Certainly a timely study would be an examination as to how this is best accomplished and what procedure might be followed to bring this about.

Issues for Urban Design Education

In conclusion, the author believes that educators (and practitioners) concerned with training individuals to deal with the physical character and form of the urban environment must address themselves at this time to the following issues:

1. Will a consensus regarding terminology, approach, methods and/or the job to be done advance or deter academic programs and practitioners in dealing with urban visual form matters?

Should urban design be tightly defined; can visual matters be integrated into the planning process at the city scale; should urban design be assigned professional status or absorbed into one of the traditional design professions and the term eradicated; is specialized fragmentation, experimentation, and pioneering by each profession and its related academic program in the name of "urban design" (as each defines and interprets the term) the most worthwhile and appropriate approach in lieu of unified action?

2. Will a more pleasing and meaningful urban visual form arise from a rational analysis and interpretation of explicit visual goals and objectives having a consensus of society, or from the spontaneous, intuitive brain storms of either a limited group or one individual?

Can beauty be quantified for public consensus? Should visual

matters be decided by the general public, by a limited group, or by

one individual trained in these matters; are the existing "tools" of

the traditional design professions adequate to meet contemporary urban

visual form problems and opportunities; must a rational decision-

making system, with explicit and measurable criteria, be adopted

before worthy urban design can be accomplished; should city-scale

visual proposals be implemented which can be justified only on the

basis that "I like it"?

3.   Will limiting the admission of only highly talented three-

dimentional designers possessing architectural degrees to urban design

academic programs insure the most meritorious recommendations for

manipulating the perceptual elements to achieve the ultimate in a

pleasing and meaningful urban visual form?

Should students with backgrounds in disciplines other than archi-

tecture, city planning, and landscape architecture yet who possess an

interest in urban physical form matters be admitted to urban design

programs; should urban design curriculums and students be integrated

or separated from other disciplines and students; should planning

courses be "tacked on" to architectural programs and vice versa, or

should complete new curriculums for urban designers be formulated;

should urban design faculties be cross-trained or specialists in only

one field; is collaboration really necessary or are "hand-me-down"

decisions (eg. from planner to architect) adequate for producing

worthy urban design?

4.   Will academic concentration on special parts of the city rather

than the total city lead to attaining a more pleasing and meaningful

visual form for the total urban environment?

Should the C.B.D., the waterfront, and other unique areas pre-empt consideration of the typical suburb, residential, and industrial areas in academic studio programs; should the total city be examined simultaneously with the unique areas of the urban environment; should new growth (new towns, etc.) pre-empt selective clearance and rehabilitation studies; should utopian studies in lieu of reality be advocated in studio programs?

APPENDIX I

CORNELL UNIVERSITY

Degree Conferred:

Master of Architecture in the field of Urban Design.

Admission Requirements:

Students who have satisfactorily completed a five-year course in architecture at an approved institution, or its equivalent, may be admitted. All applicants are urged to take the Graduate Record Examination (GRE) Aptitude (Verbal and Quantitative) Tests of the Educational Testing Service.

Program of Study:

Urban design is an integrated field concerned with the solution in architectural terms of the developments proposed by city and regional planning. The program of study includes an interpretation of such course material from architecture and planning as will equip the student with an adequate conceptual framework for practice, and is particularly concerned with the three-dimensional definition of the urban environment in terms which give significance to the individual.

The program of study, cooperatively worked out between the faculties of Architecture and City and Regional Planning, permits a degree of special treatment for the individual student. Normally, four semesters of study are required, and the student should not anticipate completing his studies in less than this time, though in certain special circumstances the requirements for a degree may be completed within a three-semester period. It is possible in individual cases, by specific arrangement in advance, to complete the requirements for both the Master of Architecture and Master of Regional Planning degrees in three years.

Illustrative Curriculum:

FIRST YEAR
Fall Term   Credit Hours
Introductory Problems in Urban Design (Studio) (Arch. 190).   6
Theories and Principles of Urban Design (Arch. 424, new). .   2
Principles of City and Regional Planning (Planning 710) . .   3
Perception (Psych. 511)   4
Elective.   3
                                                    TOTAL   18
Spring Term
Problems in Urban Design (Studio) (Arch. 191, new).   6
Theories and Principles of Urban Design-Advanced(Arch.425).   2
History of City Planning (Planning 701)   3
Theory of Architecture (Arch. 423)   3
Elective.   3
                                                    TOTAL   17

94

SECOND YEAR
Fall Term   Credit Hours
Advanced Problems in Urban Design (Studio) (Arch.192,new) .   8
Site and Landscape Materials (Arch. 641). 2
Introduction to Planning Theory (Planning 712). 1
Seminar in Urban Ecology (Planning 714) 2
Elective. 3
                                                     TOTAL   16

Spring Term
Advanced Problems in Urban Design (Studio) (Arch.193,new) or
    Graduate Thesis in Urban Design. 9
Seminar in Urban Renewal (Planning 751) 2
Historical Seminars in Architecture (Arch. 450) (topics such
    as City Design through Conservation) 2
Elective. 3
                                                     TOTAL   16

Illustrative List of Possible Electives:

Informal Study in Urban Design (Planning 749) 2-6
Planning Analysis (Planning 730). 3
Advanced Planning Analysis (Planning 731) 3
City Planning Administration (Planning 721) 2
Legal Aspects of Planning (Planning 723). 2
Planning Methods and Techniques (Planning 734). 2
Analysis and Interpretation of Aerial Photographs
    E.E. 2621. 3
Physical Environment Evaluation (C.E. 2631) 3
Seminar in the History of American City Planning
    (Planning 702) 2
Seminar in Urban Economic Analysis (Planning 732) 2
Institutional Planning (Planning 735) 2
American Communities (Soc. 331) 4
Population Problems (Soc. 330). 4
International Urbanization (Soc. 433) 4
Seminar in Urban Government and Administration (B&PA 554) .   3
Urban Politics (Govt. 312). 4
Informal Study in Housing and Renewal (Planning 759). . . .   2-6

Faculty:

     The instructing staff consists of members in the Departments of
Architecture, City Planning, as well as faculty members in related
departments of the University. Studio program is in charge of
Associate Professor Colin Rowe, B.Arch., M.A., in the Department of
Architecture.

HARVARD UNIVERSITY

Degrees Conferred:

Master of Architecture in Urban Design; Master of Landscape Architecture in Urban Design; Master of City Planning in Urban Design. The Faculty of Design will recommend for the appropriate degree in Urban Design, a student who already holds a first professional degree in design or admitted to equivalent standing, has received credit or passing final grade in the prescribed coursework.

Admission Requirements:

A candidate for a degree in Urban Design must hold one of the School's first professional degrees (B.Arch., M.L.A. or M.C.P.), or equivalent preparation elsewhere. Applicants are being advised that increasing emphasis is being placed on preparation that includes creative experience in the visual arts: in the creation of form in different two and three-dimensional media. This should include training in freehand drawing, in graphics, in design fundamentals of the workshop type, or in sculpture, as well as in the history of the arts.

Program Study:

The curriculum in Urban Design is an advanced inter-departmental program and normally consists of one academic year of intensive theoretical study and practical application of the functional and aesthetic principles involved in the design of cities or substantial parts thereof.

The year's work comprises: a two term studio in urban design, which deals with problems of increasing complexity as the year progresses; a one term seminar on the shaping of urban space, which pays comprehensive attention to the theoretical and historical factors underlying the design of major urban spaces; a one term seminar on factors shaping the city, which deals with the physical and cultural forces that determine urban form; in addition, two one term elective courses, selected in consultation with the Faculty. These electives are intended to broaden the individual student's knowledge in the field of urban design and need not be taken within the Graduate School of Design. All the other courses are offered jointly by the three departments of that school and are planned to unite the contributions of architecture, landscape architecture, and city and regional planning.

Faculty:

Members of the faculty of the Graduate School of Design who are specifically involved in the Urban Design Program are:
Wilhelm Viggio Von Moltke, Dipl.Ing., M.Arch., Professor of Urban
    Design and Director of the Urban Design Program.
Jose Luis Sert, M.Arch., A.M. (hon.), Professor of Architecture and
    Dean of the Faculty of Design.
Jerzy Soltan, Dipl.Arch., Professor of Architecture and Urban Design.
Jaqueline Tyrwhitt, Dipl.T.P., Associate Professor of Urban Design.

96

Fumihiko Maki, B.Arch., M.Arch., Associate Professor of Architecture.
Francois Claude Vigier, B.Arch., M.C.P., Assistant Professor of Urban
   Design.

UNIVERSITY OF PENNSYLVANIA

Degree Conferred:

Upon completion of the first two year's coursework and one Summer of office practice, the student receives the Master of City Planning and Master of Architecture degrees simultaneously. A certificate in Civic Design is awarded at the completion of a third year. The third year's work normally satisfies the course requirement for the Ph.D. degree.

Admission Requirements:

Prerequisites for admission include: (1) a Bachelor of Architecture degree, (2) introductory economics, (3) unusually high design ability. In special cases, students may be admitted without all of the above requirements.

Program of Study:

Since the improvement of the quality of the urban environment is properly within the province of all three professions, the Departments of Architecture, City Planning and Landscape Architecture have therefore joined in offering a program in Civic Design. In the basic two years the student will devote about half of his time to studio and half to basic courses in city planning theory, analysis, the structure of the community, history of city growth, transportation, housing and community facilities, planning administration, land economics and finance. The third year, which is optional, will be devoted to intensive studio work in the design of urban space, redevelopment projects, commercial and community centers.

Plan of Study: Civic Design:

FIRST YEAR
Fall Term   Credit Hours
Introductory Problems in Civic Design (703).   4
Introduction to City and Regional Planning (510)   2
Structure of the Urban Community (511)   2
Theories of Planning Method (542).   2
Man and Environment (L.A. 611)   2
                                                    TOTAL   12
Spring Term
Civic Design Studio (802).   4
Theories and Principles of Civic Design (614).   2
Housing and the Building Industry (661).   2
Transportation and Land Use (662).   2
Economics of Land Utilization (663).   2
                                                    TOTAL   12
Summer
Office Practice (901).   2

SECOND YEAR
Fall Term   Credit Hours
Civic Design Studio (803)   4
Case Studies in the History of Cities (616)   2
Engineering Aspects of City Planning (631).   2
Planning Analysis (641)   2
Law of Planning and Development (651)   2
                                                   TOTAL   12

Spring Term
Comprehensive Planning Studio (801)   6
Community Facilities and Fiscal Policy (660).   2
Theories of Architecture (Arch. 712). . . . .
History of Planning (716)   2
Planning Practice and Administration (751). . . . .
Approved Elective Course.   2
                                                   TOTAL   12

Summer
Special Office Practice (902)   1

THIRD YEAR
Fall Term
Civic Design Thesis (999)   6
Case Studies in Urban Development and Renewal (743)   2
Seminar on Theory of Urban Form (811)   2
Approved Elective Course.   2
                                                   TOTAL   12

Spring Term
Civic Design Thesis (999)   6
History & Theories of Civic Design (714).   2
Approved Elective Courses   4
                                                   TOTAL   12

Faculty:
     The joint program in Civic Design is administered by an inter-
departmental committee consisting of the following members of the
Faculty:

David A. Crane, B.S., B.Arch., M.C.P., Associate Professor of Civic
     Design.
G Holmes Perkins, A.B., M.Arch., Professor of Architecture, Dean of
     the Graduate School of Fine Arts.
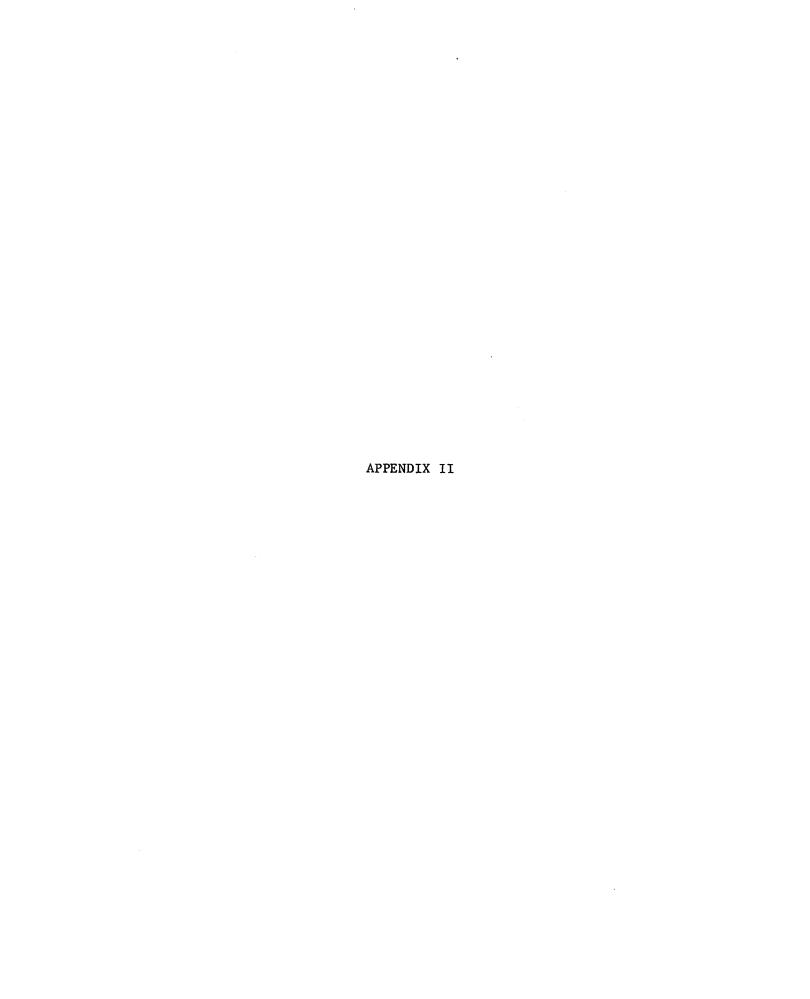Robert L. Geddes, B.Arch., Professor of Architecture.
Romaldo Giugola, B.Arch., M.S. in Arch., Professor of Architecture.
David A. Wallace, M.Arch., M.C.P., Ph.D., Professor of City Planning.
Gerald A. P. Carrothers, M.Arch., M.C.P., Ph.D., Professor of City
     Planning.
Ian L. McHarg, M.L.A., M.C.P., Professor of Landscape Architecture
     and City Planning, Chairman.
William H. Roberts, Dipl.Arch., M.L.A., Associate Professor of
     Landscape Architecture.

APPENDIX II

Following are the basic questions asked by the author in interviewing faculty and students at the three selected schools:

I. THE OBJECTIVES AND SCOPE OF URBAN DESIGN

1. How do you define the term "Urban Design"?
2. What is the scope of Urban Design?
3. What factors have contributed to the rise of this field in recent years?
4. What objectives does Urban Design seek to attain?
5. What is your conception of an "ideal city"?
6. How would you improve existing cities to achieve the "ideal city"?
7. What use is there in Urban Design for social and psychological research?
8. What are the key areas (C.B.D., etc.) of the urban environment within which the Urban Designer should work?
9. What aspects of the urban form should the designer manipulate to improve it?
10. Where, either in the United States or elsewhere, is Urban Design being correctly performed?

II. THE ROLE OF THE URBAN DESIGNER

1. What role do you see the Urban Designer assuming in society?
2. Based upon his role and the scope and objectives of Urban Design as you have defined them, what skills do you believe are necessary for him to have at his command to fulfill his function?
   a). How does he differ from the architect, the city planner, the landscape architect? What is the Urban Designer's particular stock in trade?
   b). What organizational arrangements are best suited for conceiving and effectuating urban design proposals? What position does the Urban Designer occupy in this organizational hierarchy?

III. TRAINING THE URBAN DESIGNER

1. Given the objectives, scope and role of Urban Design as you have defined them, what background should the potential Urban Designer have and how should he be trained?
2. What factors were instrumental in establishing your program and what were the most effective arguments in convincing the school's officials to accept the program? (How did you "sell" the program?)
3. What do you consider the "core" of your program to be?
   a). What type of problems do you give your students? (A collection of actual student problem handouts would be appreciated.)
   b). What do you consider important points to make in framing a studio problem?
   c). How do you effectuate collaboration between students of various backgrounds?
   d). What criteria are used to judge student work?
   e). Do you deal with "office practice and administration" in your program?

4. What positions do your students fill upon graduation?
5. What improvements do you see that should be made in your program and what arguments will you make to substantiate these changes?
6. What training and background should the teaching staff possess?
7. What is your opinion of the Urban Design program at M.I.T.?

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