THE STRUCTURE OF THE URBAN DESIGN PROCESS:
AN EMPIRICAL STUDY OF THE DESIGNER'S SOCIAL ENVIRONMENT
AND ITS INFLUENCE ON HIS PROBLEM-SOLVING PROCESSES

by

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The urban design process is that component of city planning concerned with the creation and evaluation of urban form alternatives. In real situations men participate in this process not only to cooperate in overcoming the technical and administrative obstacles to solving design problems rationally and creatively, but also to promote and protect a wide range of public and private interests likely to be affected by the outcome of the process. Men participate because it is too important to them and the things they value not to do so. In convening around the urban designer, participants create a social environment in which the designer must perform his problem-solving functions. This environment, or context, shapes the design process by communicating what goals, what alternatives and what consequences are worth worrying about. Thus it is an environment that imposes limits of a social and political character on the urban designer. Since the men, the values, and the constraints can shift from case to case and within the same case over time, it has been typical for problem solving in urban design to be highly pragmatic in character, with limited recourse in solving problems to principles outside of the specific problem and social situation at hand. As each case is considered unique, it has been difficult to generalize therefrom, since few experiences seem comparable. This is regarded as a serious obstacle to developing generally applicable methods for improving the urban design process.

This is a study of the sociology and politics of the urban design process. Its primary goal is to identify and analyze some social limits on individual problem solving in urban design that tend to appear regardless of the case at hand, resembling normative expectations by others of how the designer should enact his role in the process. Any social environment faces understandable difficulties in judging how rational, from a technical point of view, a highly complex alternative really is. Any environment must also consider its own survival and its accountability to the larger society for the decisions it makes on alternatives. Consequently, it is hypothesized that in certain circumstances the environment may recognize as rational and creative designs that meet criteria of social acceptability, regardless of the technical quality of the effort. Three such criteria are discussed in detail in this study: the environment assesses designs for their compatibility with other recognized efforts, prior or concurrent, at defining the problem and the goals implied therein; for the certainty implied in the choice of means being manipulated to achieve the goals; and for the credibility, in social terms, of the measures employed to show explicitly the connections between goals and means. The social environment expects the urban designer to adapt to these considerations in generating and evaluating alternatives, even though they may tend to produce design policy of conventional quality.

These limiting criteria may be perfectly valid in a given situation. This study
concentrates on situations where the designer chooses to debate their rationality in the interest of improving the quality of urban designs, and what his strategies for dealing with these social constraints might have to take into account in such situations. Because the quality of urban designs varies considerably, it is hypothesized that the extent and consistency with which these constraints apply must also vary. Evidence suggests that they tend to vary as functions of certain characteristics of the social environment and the designer's relation to it. Five of these characteristics are identified: the designer's status in his social environment; the relative importance of the design problem in a given universe of problems; the nature of the audience surrounding the social environment; the time horizons of the policies and actions recommended; and certain resources of the environment. Some indications of typical design strategies and of the way these parameters characteristically behave are included in the analysis.

A conception of the social environment as a set of roles and functions is developed and joined to a model of individual problem-solving to produce a model of the urban design process as a system of interactions between the designer and his environment. This model provides a convenient framework for studying and analyzing two cases of the process from which data are obtained to test the hypotheses. The cases, drawn from the Boston urban renewal program, are of the design process in the redevelopment of the Central Business District and of the process in an adjacent district known as the Downtown Waterfront-Faneuil Hall project area. Both cases are presented in detail in the study.
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The Joint Center for Urban Studies provided working space and financial assistance in addition to staff services throughout this study. I am grateful, of course, and I am just as grateful to Daniel Patrick Moynihan, Lloyd Rodwin, and the other members of the Center for giving me the opportunity to participate in a social and academic environment that I found to be impressively and consistently exciting. The intangibles of Joint Center life have made my tenure here an unforgettable experience.

My attachments to the other end of Cambridge are no less meaningful. Kevin Lynch of M.I.T. has advised me on matters of planning and design for so long that it is impossible to acknowledge him only for the help he has given me in this one study. Whatever else he is, Kevin Lynch is a teacher first, and whatever else I am, I am someone proud to have been one of his students. And to his colleagues in the Department of City and Regional Planning at M.I.T., to John T. Howard, to Frederick Adams, and to the others go my gratitude for an education I hope I shall put to proper use in serving cities and their people.
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Through it all, Lisa was there. To my wife must go all the acknowledgments that only poets can phrase well. I am no poet, but she doesn't need words to understand how very deeply I appreciated her presence during this research. But if words are customary, then let whatever good ones that appear in this study be dedicated to her.

G.N.K.
INTRODUCTION

ON SOLVING URBAN DESIGN PROBLEMS

The urban design process is that component of the city planning process which includes the activity directly related to generating and evaluating urban form alternatives, in an effort to produce statements of policies and actions with respect to the arrangement of structures, spaces, activities, and flows at community scales that satisfactorily promote relevant and comprehensive community planning objectives.

In real situations men come together to make designs for the form of cities. One reason they do so is out of respect for complexities beyond the talents and experiences of any single one of them to handle alone. The professional urban designer, if he is the one, is not always familiar with the problems of building on an esker, nor sensitive enough to the life style of Puerto Rican families to acquire and assess information on such specialized matters or to develop really

We assume that the terms "city design", "civic design", "environmental design", and "urban design" are generally synonymous. In our experience they seem to be used interchangeably and as a matter of individual preference, although "environmental design" is becoming a generic term in some quarters and some design schools are trying to impress a distinction among the several phrases. But in practice we cannot discover an epidemic concern for conceptual divisions of labor at this time. For consistency in this study we shall use "urban design" throughout, not necessarily as a reflection of our own preference, but simple as an appreciation that this remains the most popular label for the kind of activity we are about to discuss.
useful design criteria. Or, in evaluating his alternatives on the location of industrial activity in cities, he may not know enough about the prevention of water pollution to compare the rate of aerobic degradation of organic waste materials in one stream with another along which industry might settle as a consequence of the policy he recommends. Someone more competent can make the comparison.

Technical competence for the task at hand is not always the basis for a division of labor, however. Men may come together out of expedience. For example, it is often easier, or cheaper, or faster, or in some other way administratively appealing for others to collect and aggregate information on housing conditions in a community and transmit their findings to the designer, even though he may have been perfectly capable of doing the job himself.

However magnificently the efforts serve to increase the rationality and creativity of the urban design process, the technical and administrative reasons for conscripting men into the policy-making arena are of little interest in this study compared with the third reason that urban designers are never lonesome figures in the process. Men participate in urban design not only because the task is cognitively demanding or the resources in need of rationalization, but also because the generation and evaluation of urban form alternatives is just too important to entrust to any single individual or partisan group. Perfect understanding of expertly derived information on the capacity of streams to purify themselves of industrial effluents does not in itself guarantee that the knowledge will be used in erecting and destroying alternatives beyond that point which the individual decides it should be used. The technical exercise is a waste of time if the decision-maker simply doesn't care.
But other people may care and, often uninvited, they enter and interact in the social environment to ensure that their concerns and motives get a fair hearing in the urban design process. The point is all too evident, and Britton Harris supplies the reason when he comments that society must permanently accept, if it accepts at all, the results of the design process in city planning. Since society, as we are accustomed to thinking of it, is pluralistic, there is little reason in an all-or-nothing, no-turning-back situation to expect it to feel happily secure in the face of the potential for any single faction of it to act unilaterally on any permanent decision with widespread consequences. Men participate in the urban design process because it is too important to them and to the things they value not to do so.

The Objectives of this Study

This is a study of the sociology and politics of the urban design process. Forthcoming chapters, including two case studies, focus on the social context in which urban form alternatives wax and wane, with two general objectives in mind. It would be useful, first of all, to be able to describe this context in its stable characteristics. This would give a designer a conceptual framework for structuring the environment of men surrounding him, by identifying general features of social contexts that he can confidently predict without reference to the case at hand. In Chapter One, in connection with our perspective of the urban design process, we will display a model

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of the social environment as a set of roles and interactions by which it is possible
for the designer to organize in his mind many of the significant functions that he
and other participants tend to execute when they convene to solve an urban design
problem. While there can be considerable variation from case to case in the way
people occupy and play out these roles in the process, we can identify some overall
factors that seem to be significant in governing the variability. Because these
appear to be factors that can be controlled --at least in principle-- through conven-
tional social devices like the delegation of authority, hierarchical organization,
rewards and penalties, and selection of personnel, one sees some interesting
implications for the role of management in the urban design process. We will not
pursue these implications at any length, however. Our momentary interest is not
so much in what is manageable as in what is not, at least by conventional tactics.

If people participate in solving urban design problems with an eye toward what
they stand to gain or lose in the process, then the same social environment that
secures and releases resources to the urban designer so he can function more
creatively in generating alternatives and more rationally in evaluating them
contains within it potential social limits on his actions as well. Moving from
considerations of the structure of the social environment to considerations of its
performance, the second objective of this study is to examine more closely the
nature of some of these limits and the way the environment operates to control and
influence the role of the urban designer in finding and recommending urban form
policies. The assumption here is that not all constraints are inherent products of
the specific situation at hand; some are external and appear to a greater or lesser
degree in all urban design processes, though often implicitly so. Thus, there is some
predictability in the way other men want the designer to fashion statements of policies and actions, regardless of specific problem constraints or of the designer's own view of what is rational and creative in the practice of his craft. The constraints of relevance here have as their object the shaping of design policy into socially and politically acceptable channels. They are, in the sociological sense, normative regulations of the behavior of the urban designer in situations where he must resolve conflicts among goals, means, and priorities in the absence of a clear consensus on action based on the merits of the problem at hand. They are criteria, when nothing more explicit suffices, for measuring creative and rational action by the urban designer.

In Chapter Five we will discuss the reasons why the designer in these situations might expect the men around him to judge as creative and rational those choices that favor (1) a compatibility with socially acceptable ways of defining a problem and the goals it embodies, (2) a certainty in the choice of variables (the elements of urban form) brought under control and in the way in which the designer manipulates these means to his ends, and (3) a credibility based on social and political considerations in the manner in which the connections between goals and means are explicitly demonstrated, regardless of technical efficacy.

There can be variation from case to case in the extent to which these implicit constraints appear. These shifts in the cardinal rules of the game can be shown to vary directly as a function of some general characteristics of the social environment and the designer's relation to it. Designers know that these characteristics mean something to them. But for most designers the relationship is unclear between constraints on the making of urban form alternatives and such factors as the designer's
status in his social environment, the relative importance of the design problem in a given universe of problems, the nature of the audience "out there", the policy horizons, and certain resources of the social environment. As discussed in Chapter Six, all of these features of the social situation can vary from case to case.

Thus, we posit two classes of variables but, insofar as our evidence indicates, a more or less predictable relationship between them, and that is the significant thing here in terms of strategies for dealing with social situations. The dependent variables are certain general constraints on solving urban design problems, and the independent variables are certain general characteristics of the context for problem-solving. As these independent variables are somewhat controllable -- again, at least in principle -- management seems to have a place here too, however unfamiliar it might be.

The Boston Development Program: A Source of Data

We like to think of what we do here as having an affection for reality and the actual problem-solving circumstances under which urban designs are expected to flourish. To this end we will examine some cases of the urban design process. Ideally we should select them from a variety of urban design problem situations. Practically speaking, however, we will turn to the American experience in urban renewal design for our sources, for urban designing in urban renewal is where designers have most actively participated and where the data are readily available. Lest it be considered too narrow a data base, urban renewal design often combines features of the larger range of design problems that designers might face. We confine our choice of cases to the Boston area for a number of reasons. First, it is convenient,
both in time and budget. Second, our familiarity with the area is presumed an asset. Finally, we would like to minimize any differences in the broad social, economic, and cultural contexts of our cases so that we can make comparisons among our findings without fear of extraneous influences.

As anyone knows who monitors the way American local governments use and abuse the legislation --and money-- that permits them to redevelop the urban landscape in large swatches, renewal in Boston now ranks among the most ambitious of all the contemporary efforts. Over 3,200 acres in this city of 37 square miles await the better days that redevelopment promises. The intensity of urban renewal here is a product, first of all, of the age of the physical form and, second, of the initiative of the men anxious to rebuild it. In the course of the program, and amid the brickbats hurled at it for other reasons, Boston has managed to muster a reputation for the urban design component of its planning process, for the physical and visual quality that these men are trying to achieve in the Hub’s reformation. Within the Boston area we will draw our cases from among those where the urban designers played a strong and active role in the process, on the assumption that our findings in these cases would have more significance in our thesis. A further criterion requires that the cases be representative of the kinds of renewal projects in which urban designers typically become involved, so that reasonable and useful generalizations can be made.

On these bases a pair of projects have been selected. They are shown in Figure I in relation to the lay of the city and to their sister projects in the development program, and they are chronicled in Chapters Three and Four of this study. The dates below are those of the planning period in which each design process was most active,
FIGURE 1. -- THE CASE STUDY AREAS IN RELATION TO BOSTON AND TO THE CITY'S DEVELOPMENT PROGRAM
though our research carries us into prior events and our reporting includes what we think are some relevant postscripts:


Sooner or later, most cities undertake some kind of renewal in their core areas. Indeed, the urban renewal program is structured in part on the theory that the decline of central areas can and should be arrested. Thus, the CBD is becoming a typical kind of design problem, one useful to include in our dossier of cases. A study of the design process in Boston’s core presents us with this opportunity.

(2) The Waterfront-Faneuil Hall Project (1961-1964):

The other case we would like to look at in depth mirrors a trend in many American cities to use the techniques of renewal planning and design to exploit unique urban characteristics and to recapture the benefits of city resources now underutilized or lost altogether. Urban design becomes a tremendously important consideration in these projects and, perhaps because of this potential contribution, a problem like Boston’s Waterfront area could be thought of as the designer’s kind of design problem.

In each of these cases, as elsewhere in the rebuilding of this city in this decade, the Boston Redevelopment Authority (BRA) figures prominently. However, the designer’s "social environment" means something more than the local public agency in which much of the actual designing is done. While the agency is indisputably a valuable part of the picture, there will be participants in the process who come from outside of it, linking with the agency if only in the common objective of solving a design problem or, as some preferred to think of it, to prevent the agency from solving it for them. Thus, "environment" refers to the task-oriented social system, no matter what formal affiliations are involved.
Because of this, we expect to find differences in the social, organizational, and political flavor of the cases, despite common roots in the BRA.

Coupled to an empirical base, then, this study analyzes the social environment of the urban designer for the typical limits it can impose on his solving design problems rationally and creatively. Before proceeding, however, we should establish what the designer's process for solving complex problems looks like and what it means, practically speaking, to be "rational and creative" in this process.

A Prologue: Some Current Views on Problem Solving

A model of the activities of the urban designer is a model of problem-solving behavior. The literature on this subject is indeed impressive, both in the disciplines it spans and in the scholarship of the research. Everyone solves problems, and people would like to be able to solve them a little better than they do now. Although a number of intellectual arguments hover around certain features of the problem-solving process, most variations among the prevailing models are in style and emphasis, at least to the extent that we need a sketch of the process here.

The contemporary literature begins with Pierce and Dewey, though John Ruskin, in The Seven Lamps of Architecture, begins to sketch out the process too. Systematic inquiries belong to this generation, however, and some decent summaries of the process and the research that has gone into it can be found in March and Simon, Organizations (Wiley, 1958) and in Thibaut and Kelley, The Social Psychology of Groups (Wiley, 1959), and in the literature of Gestalt psychology. Chief among the aspects of problem-solving that are fertile fields for argument is how decisions are actually made in the process and whether any style of decision-making is more rational than its alternatives. Ruling out the normative approach leaves two prevailing and somewhat conflicting theories. Lindblom's theory of "disjointed incrementalism" (Braybrooke and Lindblom, A Strategy of Decision, The Free Press, 1963) enjoys considerable popularity except, at least, with Etzioni, who tends to be more optimistic about the cognitive abilities of policy formulators and evaluators in his theory of "mixed scanning" (Etzioni, "Mixed Scanning: A 'Third' Approach to Decision-Making", in Public Administration Review, December, 1967).
Give or take a couple of steps in the sequence, and accepting that steps may be combined, repeated, abridged, and aborted just as impetuously as not, problem-solving dawns with some awareness of a difficulty, some definition of the problem to be solved (even a vague and tentative assessment will be good enough at times, a rough model of reality), an idea of the goals toward which all further steps should be directed, and a picture of the constraints likely to blunt the attainment of a more desirable state of affairs than the one characterized by the present difficulty.

Tucking these impressions into a not-too-remote corner of his mind, the problem solver assesses the means at his disposal for doing something about achieving his goals. He canvasses the variables of the real world for their relevance, and often becomes aware at the same time of factors restraining his ability to gain control over them. His object is intervention, and his actions are becoming more purposeful than random as he seeks to determine where and how to intervene effectively, given the constraints on the information he has, and his inhibited qualifications for attacking the problem in the first place. Then if he is lucky, or very brilliant, or a dictator, or if he has encountered and solved exactly the same problem a thousand times before, he can find the combinations and arrangements of variables and sequence of operations on them that yields the single, optimum solution to the problem he has defined. Mostly, misfortune strikes, and he may find instead an embarrassment of alternative ways all clamoring to solve his problem, many of which do not communicate adequately or truthfully at first their real worth. Not only might the designer worry about how really good they are, or how much better they are than their competitors, but there can be nervousness about how good they might be relative to any other alternatives the problem-solver might discover if he put some more precious time and energy into
the search, instead of stopping it when he does.

Being resourceful, the problem solver invents, intuits, or borrows other people's inventions and intuitions at this time. He needs ways of predicting the consequences of his alternatives and of formulating his assortment of hazy goals more precisely, so that he can seriously evaluate his possible solutions against them. It is the usual case in urban design that his goals are multiple and potentially conflicting, so he must make decisions on their relative priority before testing his creations. Even at that, much of his evaluation will have to be at the margin, a matter of determining how much of one goal he is willing to sacrifice in order to achieve another. Sooner or later, and usually with a residue of uncertainty remaining, he chooses one alternative out of the pack as his solution, chagrined at the thought that, by now, the problem may have changed significantly and his recommended alternative isn't really much of an alternative after all. Or if shifting problems and shifting constraints don't worry him, his preferred alternative still might not prove the best possible option. It may not be any better in some respects than other possibilities, and in the long run it may turn out that he has preferred an awful solution, simply because he forgot, or was ignorant of, certain of its consequences back when he was trying so hard to be careful about such things. But just as often, this answer born of uncertainties and of limits on his problem-solving resources will be satisfactory, providing for the moment at least an opportunity to move away from a problem and an optimism that, if he had to do it again at some other place or time, he probably could.

This is the typical model of human problem-solving. Only the arch-classicists believe that yesterday's normative model, with its disregard for the cognitive limits
on choosing goals, means, and priorities, is a useful enough guide to fit the complex problems of today. No rms are changing, as satisficing replaces optimizing as an "ideal" pattern of action. Problem-solving behavior is now distinguished from habitual decision-making behavior, and changing as a result are standards for evaluating solutions and the performances of men in achieving them. No longer, it seems, will men accept universal images of rationality and creativity as benchmarks in measuring the worth of the problem-solving effort. In urban design men participate in the making of design decisions to promote or protect their interests, and not too many appeals to objective measures are going to convince a participant that chosen policies are supremely rational or masterfully creative if he happens to come out of the process a loser.

Faced with awkward problems of measurement, the current trend among students of problem-solving is to be very cautious in attributing rational and creative behavior to the process. Both concepts assume relevance only in reference to a shifting set of standards attuned to the characteristics of the situation at hand.

For example, there seems to be nothing inherent in the philosophy of problem solving to give the process claim to being a rational way to do business. March and Simon note that reduction of complex reality to a model sufficiently simple to be handled by problem-solving processes is rational behavior, but no claim is made that the subsequent behavior involved in problem solving necessarily is also rational, in the sense employed in classical decision-making schema.\footnote{March and Simon, \textit{op. cit.}, p. 153.} Indeed, in many situations
the logical construction of a problem may change the situation that is being analyzed and thus render the formulation inaccurate. Thus the quest for rationality, under certain circumstances, may turn out to be an irrational form of behavior. Katona, in an effort to distinguish problem-solving behavior from habitual behavior, strikes at the conventional notion of rationality:

...it is not justified to identify problem-solving behavior with rational behavior...it is part and parcel of rational behavior, according to [Kenneth] Arrow, that an individual makes the same choice each time he is confronted with the same set of alternatives. Proceeding in the same way on successive occasions appears, however, a characteristic of habitual behavior. Problem-solving behavior, on the other hand, is flexible. Rationality may be said to reflect adaptability and ability to act in a new way when circumstances demand it, rather than to consist of rigid or repetitive behavior.\(^5\)

Katona substitutes for the classic norm of rationality a more flexible standard that recognizes the context in which the harried problem-solver operates, and acknowledges that this context can shape his actions by imposing constraints on them. Constraints, as others have pointed out, make strategies necessary. Problem-solving behavior has a strategic flavor, and optimum rationality has come to be interpreted as "adaptive" rationality.\(^6\)


\(^6\) It is not clear to us if this is the same as the familiar "bounded" rationality concept that appears at the crossroads of normative and positive decision theory. That concept could fit the model specified by Kenneth Arrow (because it is not an optimizing model) while Katona's characterization could not, by definition. In other words, bounded rationality is not necessarily consistent with the concept of strategic problem solving, if we take Katona at his word.
The importance of creativity in solving urban design problems is undeniable and in recent years there has been some research aimed at maximizing the opportunities for creative thinking in problem-solving environments. Generating possible solutions, while it may be a process involving irrational search procedures, is characteristically creative even when a high level of mechanical aid is enlisted in the process to assist search; but while efforts to study creativity systematically appear on the increase, a reasonable measure of the creativity demonstrated by one alternative solution to a problem with respect to another evades firm grasp. The Bruner, Goodnow, Austin emphasis on relating creative behavior to situational constraints hints at a complicated measure that extends beyond deciding if the solution is unusual or unique with respect to the entire range of solutions that might possibly or might conventionally be generated. Alger and Hays concur, noting that this determines only that the solution is novel. For a solution to be creative it must also meet the test of being successful in solving the problem and this, of course, is the identical test of rationality, so that the two concepts are inseparably related. Creativity should measure not merely the imagination inherent in an alternative offered as a solution, but also the effectiveness, as measured against problem requirements, with which the solution is executed.

7 Crutchfield, for example, reports on research dealing with the effects of conformity pressures on creativity, and notes that such pressures tend to elicit the kinds of motivation incompatible with the creative process (in Gruber, et al., Contemporary Approaches to Creative Thinking, Atherton Press, 1962, p. 121). Yet, as Etzioni cautiously advises, such pressures are sometimes necessary from an organizational viewpoint, thus making the environmental issue partly one of striking a balance between autonomy and conformity (Modern Organizations, Prentice-Hall, 1964, p. 77).

8 Bruner, Goodnow and Austin, A Study of Thinking, Wiley, 1962, pp. 54-55.
Creativity is not associated with solutions that fail, no matter how novel they may be. If a solution is novel it represents a departure from past practice or thought; for it to be creative as well, that departure must be socially valued.

Thus, the context of problem solving --to be partially modelled in our portrait of the social environment-- is a powerful influence on how the problem solver's performance shall be judged. Reasonable action in one context may be completely unacceptable in another. The problem solver knows this and, as far as he is concerned, adaptive behavior, with its flair for opportunism and its hazy line between principled and unprincipled actions, happens to make a great deal of sense.

This is not a defense of strategic problem-solving in urban design. When success is completely its own justification, and recourse to practicality, or experience, rather than principles outside of it serve as the only real basis for deciding on goals, means, and priorities, the pragmatic approach comes perilously near losing its moral philosophical underpinnings and resembling instead only a "vulgarized caricature" of what men like Dewey and Pierce wrote about. Moreover, the limits on experience and on the extent to which the test of success may be applied before important values...

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9 Alger and Hays, Creative Synthesis in Design, Prentice-Hall, 1964, p. 31. The resistance in some quarters to treating creativity as anything more than a mystique is discussed by Garvin in "Creativity and the Design Process" in AIA Journal, June 1964, p. 89. At the extreme, where creativity is viewed as a highly personal, subconscious activity, it may be hard to distinguish this process from the neurotic process of merely transmitting unconscious conflicts into some socially or artistically acceptable symbolic form (see Kubie, Neurotic Distortion of the Creative Process, U. of Kansas Press, 1961). Projecting this analogy into the social situation, "Organizational activity...often provides opportunities for people to channel and harness their neurotic impulses. The cost of such self-administered therapy can be measured only by the sacrifice of other aspects of organizational performance and the negative impact on the lives of other members of the organization." (Gross, Organizations and Their Managing, The Free Press, 1968, pp. 195-196).

10 The philosophical issues are fully considered in the excellent discourse by Kaplan, American Ethics and Public Policy, Oxford University Press, Galaxy Edition, 1963.
are left out of the accounting can produce a narrowness in the way both means and ends are conceived. Problem-solving behavior under these conditions is safe behavior at best; it is hardly a guaranteed instrument for spectacular or radical change. The efficacy of problem solving in the case of urban design is in doubt, and its major drawback has been assessed by others:

The emphasis is...on shaping or reshaping the physical environment to eliminate specific difficulties or to achieve specific effects. Limited generalizations or rules can be formulated; but the tendency is to emphasize the uniqueness of each problem and the inapplicability of 'stratospheric generalizations.' The advantage here is the 'realism'; the weakness is the handicap implicit in the assumption that general ideas and theories are of almost no value as guides for dealing with specific cases or classes of cases.11

Urban designers, a sensitive breed of men, may well balk at being summoned on a charge of insensitivity to theoretical principles, and their defense is a strong one: there is a poverty of theory in urban design. As a discipline so vitally concerned with the future urban design typically lacks adequate means of predicting the efficacy of current policy decisions. Without reasonable confidence in making choices in matters to be settled, practically speaking, once and for all, the concern about making a bad choice can be great, so enormous that rather conservative levels of rationality and creativity may be preferred by the men who come together to solve urban design problems, rather than accept the risks of failure.

Concern about error is a necessary condition for evoking problem-solving behavior. And error, as any veteran of policy-making campaigns will attest, can be political as well as technical. As long as designers cannot rely on theory to diminish this anxiety, problem-oriented, problem-solving behavior becomes the plausible alternative. This kind of behavior, it would seem, is made more probable the greater the absence of theory. Therefore, it may well be that problem-solving behavior develops imperatively out of the inadequacy of theory, not out of disregard for it.

Powerful theories may be a long way off, but urban forms will be proposed almost daily in the meantime. So long as ad hoc strategic problem solving will feature the urban design process in real situations, then the study we undertake here has its justification. In searching for common elements in the relation of problem solving to context, in the case of urban design, we hope to make the consequences of strategy a little bit more predictable and strategy itself a little less pragmatic than it seems to be at the moment.

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12 Bruner, et al., op. cit., p. 210. Incidentally, this is almost explicit in that aspect of research into design methods that deal with defining (clarifying) the problem, and restating it in such a way that it can be approached more rationally and creatively. The guiding axiom in this research has been best articulated, we think, by Albert O. Hirschman, a non-designer, who contends that "mistakes are likely to occur principally and systematically when the motivation to solve problems outruns understanding of the problem." (Journeys Toward Progress, The Twentieth Century Fund, 1963, p. 236.)
CHAPTER ONE

THE STRUCTURE OF THE URBAN DESIGN PROCESS

The Elements of Social Environment

How does one describe the way men come together to constitute the environment in which urban design problems have to be solved? Talcott Parsons suggests that there are probably two ways of analyzing the system of interplay among participants in a process. One may cast the system in terms of its own value system or, alternatively, one may view it as a system of roles. As the structure of the urban design process is likely to be characterized by a multiplicity of values, establishing that kind of system poses particular conceptual difficulties. It is conceivable, in fact, that the limits of the value system might be coterminous in any given case with those of some enveloping social system --like the culture at large-- in which the design process operates, and, indeed, the limits may change from case to case. Finally, a value system is a very generalized pattern of preferences and really describes a desired social state without constraints and at a level above, and independent of, the immediacies and peculiarities of the situation at hand. This is precisely what we don't want for a conceptual framework, since the problems of operating in a world of constraints are of extreme interest to us. Cultures and societies might be

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identified and distinguished according to overall patterns of values, but certain smaller and less stable groupings of people are not so easily perceived in this way. 2

Proceeding on the assumption that the way men come together in their encounters with complex design problems might be cast as a system of roles leads to more interesting and practical considerations. Using roles and their interrelationships in portraying the immediate context of urban designing is the same as depicting the structure of the process, and by analyzing the structure in terms of its contribution to the outcome we are also looking at the performance of the system and, therefore, at roles as patterns of activity. 3

The concept "role" is generally understood, we think, but a number of distinctions among basic types of roles are important to outline here. Roles in their true sense are taxonomic tools with an action orientation; they are labels assigned to a class of one or more defining characteristics of behavior with regard to other persons, to a specific external event, or both. When Parsons suggested a system of roles as a basis for analysis, it seems that he was thinking of a role as a catalogue of

2 Values cannot be ignored, however. Parsons notes elsewhere ("Some Considerations on The Theory of Social Change", in Rural Sociology, XXVI, 1961) that a value system is the highest-order component of any kind of structure. We treat values separately, however, insofar as the analysis in Chapter Two of the socio-political climate in which our cases were set may be regarded as a statement of certain of the key elements of the local value system that were overall determinants of the shape each process took.

3 See Gross, Organizations and their Managing, The Free Press, 1968, pp. xi-xv. Gross quotes from L. L. Whyte: "There is no sharp division between structure and process, because structure is a limiting case of process."
expectations about behavior. This has come to be called a prescribed role, and has attached to it (or has as its antecedent, perhaps) the concept of norms. Norms are more or less stable rules about behavior on which there is a general consensus and which serve to regulate behavior without very much having to be said or done explicitly in this regard. The role of "Father", to take a standard example, has associated with it a variety of norms (which may vary from one culture to another) that lead to expectations about what a father is supposed to be and supposed to do in relation to his child. There may be different norms, of course, prescribing the role of the father in his relation, say, to the mother or to the task of maintaining the economic well-being of the family unit.

A role may also be thought of in terms of actual behavior exhibited with regard to a specific problem. This is known as an enacted role, and it does not go hand in glove with norms, except to the extent that if one wished, he might infer norms from observing the behavior and thus classify the behavior according to some ready-made prescription, if it were available. A male adult observed assembling a set of model trains with a child standing eagerly at his side might be classified as the Father,

4 Parsons, Essays in Sociological Theory, Free Press, 1949, p. 34. A relatively recent development for systematically studying role expectations is Q Technique, as modified to take the form of a questionnaire, used earlier by Bidwell in the study of school system organization ("Some Effects of Administrative Behavior: A Study in Role Theory", in Administrative Science Quarterly, September, 1957) and more recently in the design professions by Krampen (Typical Perceptions of Actual and Ideal Job Conditions By Canadian Industrial Designers, Design Studies Group, Univ. of Waterloo, Ontario, undated). Q Technique is a device by which subjects sort predetermined preference and attitude statements concerning a particular topic, the ranking being expressive of the inner significance the statements have for the subjects.

5 See Jackson, "Normative Regulation of Authoritative Behavior", in Gore and Dyson, op. cit., p. 229; and Rommetveit, Social Norms and Roles, University of Minnesota Press, 1954.
simply because such behavior would be expected from fathers. Of course, he may be the child's uncle instead, which proves that one may not wish to infer from observation, even in relatively uncomplicated situations.

We shall argue that the role of the urban designer in the process has implicit norms attached to it by the other participants—the other role players—through which the social environment intends to regulate the designer's behavior in generating and evaluating alternatives, and that the purpose of these norms is to insure the social and political efficacy of design policy in situations where no explicit or agreed criteria for decision-making on policy matters exist. Our case studies focus on the manner in which designers actually enact their roles in these situations. Our interest is in the correspondence between the implicit rules, the designer's actual behavior, and the outcome of the process.

A third type of role is the functionally requisite role. It originates in the situation at hand rather than in the individual's actions or the environment's expectations, and concentrates on specifying the kinds of behaviors, or role functions, that must be performed in order to cope successfully with that situation or to achieve some goal or set of goals. Functionally requisite roles provide a standard against which the functional value of either the prescribed or enacted roles might be judged relative to a particular situation. It is evident that if one wished to structure and coordinate activities, or interactions, or procedures in order to accomplish a job, it would be very difficult to do without some impressions of the functional requisites involved. What we propose to do here is to organize these impressions into an elementary logical model of the urban design environment so that we might have a framework for structuring the problem-solving process outlined earlier, and for analyzing the case data. The model
is based in part on the need for a set of roles and functions to develop in response to the technical and administrative demands of solving complex urban design problems and, therefore, is typical — up to a point — of the kind of conception of the urban design process that Management would find interesting and useful.

Even prescribed roles are usually characterized or identified by the functions their occupants should perform, regardless of who those occupants might be. If the process is externally oriented these functions must be defined as operations in response to handling the characteristic components of the problem. Thus the functional roles that various participants play in the urban design process should be identified and related to one another in terms of a single common set of elements that, when joined to explicit needs of the urban designer in generating and evaluating alternatives, mirror his relation to the social environment at any point in time.

The Elements of Urban Design

The objective of the urban design process is developing and evaluating urban form alternatives. The elements of designing on which, and with which participants in the process operate in this quest are three: information, criteria, and design possibilities. In bits and pieces, and in a variety of languages, these elements appear in the literature already. Leonard Kitts, for example, notes that functional operations in complex designing can be reduced to two types: the handling of data and the manipulation of physical (including visual) design components. This corresponds

to a focus on information and on design possibilities, but because our definition of the urban design process (see page 10) relates designs to purposes and attends explicitly to the evaluation of alternatives as well as to their identification, criteria -- operational statements of planning goals -- and the functional operations associated with them are just as important to include as a separate consideration. Indeed, if the generalized task functions of the problem-solving process, such as "perceiving and diagnosing the problem" and "readying the task for group action" were to be made more explicit, one would quickly discover that many of these so-called phases in general problem-solving will demand analytical operations involving the development and application of criteria statements.

Information, criteria, and designs permeate the design process and are the elements that all participants encounter in one way or another during their tenures in the process. They are the basic tools in the long and often arduous trek from the first awareness of a design problem and the need for urban form alternatives to that final occasion when the problem is solved with some measure of satisfaction, and perhaps an equal measure of misgiving. Many of the characteristics of these elements are immediately identifiable, especially those that are likely to discourage reasonable men from attempting to manipulate and control the elements for the sake of rational and creative design.

First, these elements are dynamic. They can change over time, and unpredictably so. New information may be introduced, existing criteria may be revised or new ones added to the stock as problems are understood more clearly and goals emerge, and design possibilities may expand, contract, or change altogether in scope or in content. Roles are nothing more than organizational devices for handling the external problems of dealing with tasks in the environments and, quite obviously, a system of roles must
face dynamic tasks. Additionally, these elements are interdependent, for a change or revision in the state of any one of them is likely to have ramifications for the others. The elements appear in various forms: information, for example, can be verbal or visual, a set of hard facts, or a collection of hazy impressions or value judgements. We know of no rule that says these elements must appear in any special order or point of time in the process. Regardless of how it is packaged, new information, for example, can enter at almost any time.

Information, criteria, and design possibilities can also have value attached to them. They can be judged right, wrong, or indeterminate, important or banal, conservative or radical. And sometimes an opinion regarding the reliability of the human source of information, for example, will color a priori the judgement about the worthiness of the contribution. Thus, the elements of urban design are idiosyncratic, but they are elements about which decisions have to be made, and around which functions have to be organized so that these decisions are facilitated. The urban design "problem", stated operationally as an organizational problem, is the identification of a shifting set of requirements for operating on information, criteria, and design possibilities, and the correlation of these operations. A system of interaction among men participating in the design process, no matter the degree to which it assumes an identifiable organizational form, is a system for meeting these requirements in whatever fashion is suitable in aiding rational and creative policy-making in the urban design. Social processes guide the functioning of that system. Such devices appear to be myriad. Some of the familiar ones include authority and hierarchical controls, delegation of responsibility, inducements (and penalties), coordination techniques, bargaining techniques, competition, cajolery, marketplace mechanisms,
budgeting systems, voting, brainstorming sessions, simple commands, and at least a
dozen separately identifiable processes by which men mutually adjust to the needs of
one another in coming to grips with a problem without much having to be said or done
explicitly to get them to do it. 7

Since the problem varies, the needs for dealing with also vary, and it is misleading
to conclude that men can really monitor such a complex process well enough to be
able to identify clearly the variations, at the moments they occur, and make instan-
taneous adaptations to keep abreast of the matching of dependent to independent
variables. No one possesses the prowess for that kind of overview. But the problem-
solving process has been observed enough that, when coupled with the typical solver’s
own experience in these matters, he can capture in a very general sense what the
requirements for the problem might resemble at various points in the process, and
therefore anticipate needs to some extent. At the initiation of the process, for example,
problem solvers might expect the need for large quantities of information to develop
rather quickly. At the other end of the process the emphasis is likely to have shifted
to operations on design possibilities and on the transformation of design criteria into
explicit measures of evaluation. Of course, not everything can be expected to

7In presenting evidence of mutual adjustment processes at work in The Intelligence
of Democracy (The Free Press, 1965), Charles Lindblom raises questions about deliberate
and centralized coordination as a social device in certain kinds of problem-solving
processes, and advances an admirable argument that in the absence of this popularly
presumed prerequisite to rational action, problem-solving of the kind he discusses may
not be any less rational under strategies of mutual adjustment among participants.
We discuss further the implications of Lindblom’s thesis, especially as it bears on
problems of social change in this decade, in our review of this book in Journal of
the American Institute of Planners, May, 1968.
follow smoothly according to simple principles concerning phases of problem-solving. Abberations are frequent and they can tip off needs that might have been missed. The inability to find satisfactory design possibilities might signal the need for more information, or more careful review of the criteria employed. It is likely that both pro-action and reaction are combined in some confounding way, making it seem just short of amazing that requirements for solving an urban design problem are ever identified at all.

Scope of the Model: The Boundaries of the Design Environment

How large an envelope for problem-solving behavior shall a model of the environment represent? Robert Merton advances an interesting conception of the "successive contexts" in which the creative act occurs. 8 Merton recognizes that the act, which can be assumed more generally to be any kind of problem-solving decision, is a very high abstraction from concrete reality. It abstracts from the man centrally responsible for it (a man we shall cast in the role of Designer), from his milieu or immediate environment, from the larger context which encompasses his milieu, and so on, until something that can be called "reality", or total environment, is described. Without reference to at least the immediate external environment, the temptation is to regard the abstraction as fact and a model that succumbs to that temptation "treats the innovative man as though he were entirely exempt from the social and interpersonal conditions under which he lives and works, and so expresses his capacities no matter how much these

conditions vary."9 We resist that temptation, of course, but still must face the problem of how many of Merton's successive contexts to include. Going to the extreme of representing the total environment solves nothing, of course, since such a model is impossible to handle. The level of abstraction, it seems, depends on the purpose for the model. A management model might limit its scope to those features of the environment which might be brought under control and manipulated effectively. As a result it would incorporate only the functions within the sphere of influence of traditional organization techniques, thus omitting certain features of the system and treating, in our view, far too many critical factors as external.

For our purposes a model is more useful the greater the depth of the role system prescribed. We need the model as a tool in comprehension more than we do as a doctrine for management, and there is no compulsion to employ a picture of the process only insofar as the process can control its own environment. Purely for descriptive purposes then, we can loosen certain restraints and extend the boundaries of the system that such a model should portray, to include what, in the absence of administrative control, would be the object of personal and social influence techniques instead. This enables us to account conceptually for more participants in the process and presumably more of the functions that are performed, thus making the conceptualization a more reasonable standard at the outset.

The central role in this model corresponds to Merton's innovative man, a role in which the professional urban designer is likely to find himself most of the time. The rest of the model consists of roles in direct interaction with this one, so that the social environment for design resembles Merton's milieu, the people with whom a designer is, or could be, in personal contact as he performs his functions in solving urban design

9Ibid.
problems, whether it be for technical counsel, administrative efficiency, or political expediency. Thus it is that certain potential participant roles are not granted space in the model because the Designer conventionally cannot be expected to sustain direct personal interaction with their occupants. Their influence on his problem-solving is often indirect and difficult to observe. In the model they can be assumed to function and to exert their influence through the occupiers of the other roles named.

The bounds of the model are likely to shift with the personality of whomever occupies the central design role and with peculiarities in the design problem itself, but the typical social environment is likely to have incumbents at one time or another during the urban design process in the following roles:

1. Designer
2. Decision-maker
3. Clients (several types)
4. Specialist
5. Manager
6. Independent
7. Custodians (several types)

These roles evoke their special literary images, of course, and this helps to shape expectations of the way men should enact them, by establishing functions more or less implicitly associated with them. More explicit renditions are possible, however, if these images are translated in terms of the elements of urban design.

The Designer

At the core of the urban design process in most conventional views is the role of the
Designer. Here is the artist, the urban form technician, the idea man, all comfortably composed in a unitary image. This role in the design process is generally considered to be ubiquitous, and men often devote full time to it, or at least more time than to other roles. That he may work longer and harder at his job doesn't automatically mean that the Designer is the dominant figure in the process, for the influence he exerts over decisions made in the course of generating and evaluating alternatives is a function of a greater and more complex set of variables than personal zeal or appetite for work. While the occupant of this role may aspire to a qualitative impact on urban designs, the Designer sits at the core of the process in a quantitative sense primarily: in most views he is expected to perform more functions more often in generating and evaluating urban form alternatives. Therefore, the role must be depicted as the foundation on which the structure of the process builds. As an efficient role from the point of view of maximizing its contribution to the process, the role of the Designer might have major functions prescribed for it in terms of all of the elements of urban design.

Information is critical to the Designer's performance in problem-solving. Without it the process reduces to guesswork, and even with it, the effort sometimes resembles little more than that. But rare is the situation where the Designer is expected to hold an active role in the actual acquisition of all the information useful in making design decisions. This is not to say that designers may not participate in this phase of the process. Personal visual encounters with the physical environment are universally agreed to be mandatory no matter the resources available to the designer for information acquisition, and in cases where resources for gathering information are slim, the designer may assume a much greater role than that implied here. And the Designer can bring information with him to the process, simply as a result of the kinds of other
roles he plays or has occupied outside the process at hand.

The Designer's talents normally are better utilized elsewhere so long as others are around to collect the raw material out of which the process is fashioned and to dispense it to him. The designer should function more as a receiver of information, and a rational organization model would probably include mechanisms that insure that the communication network along which information flows crosses his path in some quick and certain way. Naturally the Designer may have a clear idea of the information he needs, whether it be land use data or parochial school enrollment, and he may as a result use the devices for communication in reverse to advise of this need and ostensibly initiate a data search, though the responsibility for executing it belongs to others. Not all the information he receives is relevant, and everyone knows this. But because of the technical nature of so much of it, and because the role of Designer is expected to become the key repository for that which is dispensed in raw form, it is usually efficient to delegate to its occupant the task of assessing it for its relevance so that it may become an instrumental feature of the process. It is an instrument for his use primarily in generating and judging alternatives and, thus, through some combination of mental, pictorial, mechanical, and organizational aids he should function to synthesize the relevant information for application to his main tasks. But his relation to a larger system of roles would require that he have the means in the system to also communicate and exchange this information with others who might have a need for information but could themselves function more expeditiously in this or some other social system if it were relevant and comprehensible when they receive it. The system is often imperfectly developed in reality, of course. Information may be withheld by any participant including the Designer, or it may be transmitted to certain
participants who can use it but not to others equally dependent on it in fulfilling their roles in the process.

Operations on information occupy only a portion of the Designer's time. His own broad role in the process covers criteria and design possibilities as well, and the functions he is expected to perform here are never really separated from each other or from those connected with the information component, except in verbal constructions such as this one. It is the function of the Designer to develop criteria, that is, to take given goals (or information from which they may be inferred) and make useful operational guides to a search for design alternatives. It is not in the interest of the execution of the process for the Designer to develop all criteria all the time, because the process participants will recognize very quickly the value of differentiating general criteria from special or unique ones that require special skills to develop. But as a general rule the Designer is quantitatively expected to assume this function. Also it is not in the interest of "good" practice to diffuse this function too broadly, for it is intimately related to the function of creating alternatives --a Designer function-- and problems of communication and resource allocation may increase as these dual functions become more sharply divided. There are other, more efficient ways of checking on the criteria the Designer devises, most notably during times when explicit review and evaluation of designs is undertaken by the rest of the social environment.

The generation of design criteria carries with it their application in the development of alternatives. The search for possibilities is not presumed to be rational, even in a rational model of the process, but such a model would definitely strive to specify how the evaluation of whatever alternatives emerge can be made as explicit and rational as possible. Here again, there are certain means for establishing this
within a differentiated structure that are assumed to be more efficient than others. Those means must in part confront the necessity to have available to those expected to make evaluations some measures by which they can do this, and there must logically be a correspondence between those measures and the very criteria by which the alternatives under consideration were generated in the first place. Since search and evaluation are, as someone once said, processes that are "inextricably intertwined", the Designer is evidently destined to use measures of evaluation long before his alternatives have to be exposed to more formal and systematic scrutiny. In an effort to reduce the number of alternatives to a manageable (and often a representative) set, the Designer will make many of the transformations of criteria into measures simply as a consequence of arriving at design possibilities that are, indeed, possible designs. Naturally the Designer will go through this activity many times, an an almost cyclical fashion, as he refines his alternatives. The transformation function is his to execute, and it would be his responsibility to display "rules" for evaluation at the time he makes his recommendations on the options for urban form.

The functions of the Designer relative to the production of design possibilities have more or less been implied in the previous two paragraphs. He is expected to explore all the possibilities within capable limits, he is expected to evaluate them in the course of reducing the size of the set, and it is his job to display and explain them at times when review and selection must be undertaken by others. And no one should be deluded by so terse a summary into believing that these are merely routine functions.

With so much required of this role in the process, and with so many key functions seemingly internalized in its occupant, it is easy to visualize how a designer may be viewed as the core of urban design, and how one may get the impression that it is his
logical processes that are really on trial whenever solutions to design problems are discussed. To the extent this is so, the task of organization is clearly to provide assistance to the Designer in every possible way, to structure the process around him and his needs.

Yet it is not that simple. While supportive in large measure, the roles of others would hardly be perfunctory in a complex and dynamic situation. Moreover, there is an extent to which highly responsible functions in the urban design process would not logically be entrusted to the Designer in a conventional model, including some that establish the premises on which he proceeds. And no amount of imperturbable logic on the part of the Designer will do much good if the premises from which he is obliged to work are incorrect or insufficient. We bear these qualifications in mind as we proceed in casting a set of roles.

The Decision-Maker

If the Designer is at the foundation of the structure, the Decision-Maker leases the penthouse. If charting the future of the physical environment is to have any meaning, it requires visionaries to root their behavior in present reality, for they must set the course from Here to There by coaxing that which is desirable into sympathy with that which is feasible or, as men are wont to do, the other way around. The relation of the problem-solving processes internalized in the designer to the surrounding social environment is as a schedule of interfaces between the man and his milieu directed toward determining the desirable, ascertaining the feasible, and bridging the gap between them. These encounters shape the content of rational and creative designs by producing information vital to these purposes and no interfaces are more essential to the form-maker
than those with the person or people who, through a sequence of choices among alternatives throughout the process, inform the Designer and other participants of how well they are solving the problem that brings them all together. The Decision-Maker weaves the threads of the urban design process together, by bringing ends, means, and priorities into focus.

It is not so much in its functional requisites that the role of Decision-Maker warrants an explanation. The role belongs to the man who by election, appointment, agreement, or some lesser democratic method, gets to pass on the outcome of the problem-solving process, in the course of which he manufactures decisions that influence or control the information used in the process, the realm of criteria, and the character of yet unborn design possibilities. His own motives may be anything but transparent or objectively rational, and his particular style may well determine the degree to which the role is institutionalized and visible in the structure of a given urban design process. His personality affects the quality of the decisions he makes and the way he makes them, and his idiosyncracies can be very much on the minds of those who propose the alternatives he reviews at each stage in the development of urban form policy. The Decision-Maker is the leader, but not so much as a standardbears as a man in whom his followers recognize the authority to decide the character that urban designs will take.

Sometimes it is easier to imagine the role of the Decision-Maker in a design system than to identify its occupant. The cases we studied fortunately presented few difficulties in this respect, for the major decision-making authority tended to be stable, centralized in one man. But our studies also uncovered circumstances where the power and responsibility to exercise authority was not always present in the same man, but lay
elsewhere in social environment, outside the immediate system of design. One can imagine men passing the role among themselves like a baton depending on the issue to be decided, where the interests and values in greatest need of protection or promotion shift continuously along with the locus of authority. We suspect this would be the most trying kind of environment for a designer to operate in, though the kind characterisitic of our cases was not without its subtleties. The opportunity to count on the permanence of a highly visible broker allowed participants the luxury of formulating some rather deliberate and sophisticated strategies for influencing his decisions, ploys aimed at one man whose style and pace they would come to learn and adapt to in their tenures in the two design processes. Our case studies are vehicles for launching an inquiry into the matter of individual style in greater detail in later chapters, but whatever methods or madnesses, conservatisms or excesses its tenants bring to it, the Decision-making role in almost all cases is one through which urban form policy is shaped. As a result, it shapes the structure of the process by being the object of its influence, if not of its control.

Clients

A Decision-Maker has a stake in the outcome of the urban design process. So does a Client, except that in our typology of roles he does not exercise directly the authority that might insure that his interests are advanced by the policies that the men around him are devising. He may delegate this authority to others, or others may simply assume this responsibility on his behalf. He may think of himself as the Decision-Maker but, in the eyes of others, his assumption of the mantle is more ceremonial than real, with the authority to decide residing in some other executive. Decision-
making is not a necessary condition for clienthood in urban design. Neither is patronage, for the urban design process typically serves clients who may be unaware of the honor, much less offering it direct financial or spiritual support.

If there is common symbol attached to this role in the urban design process, it would have to be that its incumbents are dependent on this particular system of design for finding solutions to their problems. The relationship resembles the typical estate trust, where prime beneficiaries rely for results on the actions of the trustees. These beneficiaries of the design process stand in relation to problem-solvers and solution-judgers as problem-posers and solution-receivers. In this respect, the role really divides into three roles with identical functions, differing according to the kind of problem involved.

The form of the urban community is a mold for shaping society. People live, work, move, play, and learn in the giant world that the urban designer tinkers with, and alternatives are generated and evaluated with a resident and future public in mind. Even in large-scale private design, as in a private hospital complex, designers, we like to believe, consider the needs of patients and visitors at the same time they deal with problems of the organization and the efficient administration of health services. The Public Client, the mass user of urban form embodied in that elusive "public interest", has a role reserved for him in the process. We shall see, ironically, that it is usual in urban design that the anonymous consumer of cities, the man in the street, is visible everywhere except in the immediate social environment of the urban design process.

The Private Client uses cities too, and although defined as dependent for benefits on the same system of design is not identified with the faceless crowd because his uses
are pretty distinct and, with all due respect to General Motors, his needs aren't necessarily compatible with those of the public at large. His stake in the urban design process is more or less "economic". Businessmen's associations, large landholders, and private commercial enterprises fit this category. But as economic loss or gain due to changes in urban form may be indirect and measured in parishioners, visitors, and service areas as well as in dollars and cents, so too do churches, institutions, and other non-profit enterprises with special interests constitute part of the private clientele of the urban designer.

It is fair to state that everyone is both public and private in his use of cities. The man on the street may own his own home, may sit on the board of General Motors, or may rank as an Episcopal bishop. He may want to preserve his privacy and anonymity, even in public places, and his view of the public interest may be patently different from his neighbor's, because it may conflict with private interests of his that he has come to value quite highly. The distinction between public and private clients is in principle very difficult to justify, for it is often just two views of the same man. In practice, however, individual and group interests can be separated objectively because men can play both roles in their daily commerce with the world, often without inner conflict. Thus, the distinction here seems reasonable enough to adopt, reinforced by evidence that Designers and Decision-Makers usually find it easy enough in real situations to separate the two sides of the same man when having to deal with him in the making of urban form policies.

Each of these client types play a similar role in the process, primarily as informants to announce the problems they have and the goals and values they would like to see Designer, Decision-Maker, and other trustees cooperate in achieving for them. Naturally,
they hope to wield considerable influence in the structure; some succeed and others do not. All, however, must live with the outcome of the process.

Because the question "Who pays?" remains with the universal image of the Client, it demands special consideration in the model. Someone must provide spoils for the services of the experts who design policies for urban areas, but the checks for the purchase of the actual urban forms and facilities themselves are considerably more substantial. Capital and maintenance investments in roads, parks, utilities, and the countless other elements of the urban form can mount into millions of dollars with no effort whatsoever, not counting "investments" in people and their property --the costs of clearance and relocation-- that mark the urban renewal process in cities today. It is in both the public and private interest to maintain a sensible fiscal balance in remaking the forms of cities and since costs are such an overwhelming factor they can easily create a role in the design process for men dependent on the designers and decision-makers to pay due respect to them. Of ten the role of the Paying Client is occupied by players of other Client roles, but this will vary with the nature of the urban design problem, making it unwise in a generalized model to assume this as the standard case.

In urban renewal, for example, government stands as the visible purchaser of at least part of the urban form: representing the public, Washington picks up either two-thirds or three-quarters of the tab for net project costs, depending on the size of the city involved; cities, sometimes with chits from their state governments, must make good the remainder. Because of the nature of the investments being made, the Department of Housing and Urban Development is not quite the same kind of client as the man on the street, nor is the City of Boston similar in behavior to General Motors or other Private Clients.
As we shall see in our cases, the Paying Client had a significant influence on how

design policy developed, as project costs tended to be a continuous, pervasive, but

necessary constraint on design decision-making.

The Specialist

The primary roles in the design system are joined in the structure by several others

that logically seem to emerge out of the circumstances of urban designing and must, 

therefore, be recognized and descriptively differentiated. We have mentioned that

special skills are enlisted and organized in support of the Designer, and the role of

Specialist develops in response to the technical complexities inherent in solving urban

design problems. We omit from this category the platoons of secretaries, draftsmen, 

and subalterns who may rightly be called specialists in the assistance they render to the 

Designer. We are more interested in task-oriented people like planners, transportation 

engineers, and economists, whose expertise is highly technical, relatively expensive 

to purchase, difficult to duplicate (the Designer can usually find a secretarial replace-

ment rather easily if he needs one), and hard to simulate (the Designer, if he had to, 

could perform drafting functions although it may not be economical for the organization 

if these became some of his major functions). Such people are essentially solvers of 

sub-problems. They are obvious founts of information, criteria, and even some design 

possibilities but only in limited, easily defined substantive areas. From the organizational 

point of view, Specialists are instruments to be employed where necessary, not only to 

get the job done efficiently but to get it done effectively. The role is an easy one to 

comprehend because the expectations attached to it are usually clear and precise.

From an organizational point of view, specialist activities must be carefully regulated
to fit in with the overall purposes, and to be "in the right place at the right time". Of course, under certain circumstances the conformity expected from a Specialist can conflict with the autonomy he would like to maintain.¹⁰

Specialists are supposed to function very much like auxiliary designers in the process. The tasks are similar to those of the Designer but are executed within specific boundaries. In addition, certain Specialist roles include the acquisition and provision of raw material, and some participants may just specialize in these two functions.

The Manager

Where the requisite special skills tend to be administrative rather than technical the model might organize functions that should be performed in solving urban design problems into a role for the Manager. While they are specialists, the administrators, project directors, and the like are conventionally conceived of as different kinds of specialists from market analysts, soil engineers, or professors of cultural anthropology. The distinction lies mainly in the distinction between task-oriented and technique-oriented people. Managers are the group practitioners and function primarily to hold together the structure of the design process, acting as integrators and employing mechanisms, perhaps any social device they can think of that might work, to bind the system of interaction into an efficient and well-oiled operation. They really perform their functions at two levels. These operatives consider the internal problems of the relations among participants in the process, and they also worry about the external problems of meshing

the urban design process with the larger city planning process of which it is a part.

Because he is expected to deal with matters of maintaining the design system rather than with the actual problem-solving tasks of that system, the Manager would be external to a limited problem-oriented model. In this expanded model we would include him as a member of the system because some of his maintenance functions can logically be described as task functions as well --because of the way in which we are delineating functions here-- requiring that he be placed in the system. These functions lie primarily with the information component. For example, as a feature of maintaining coordination and communication within the process the occupant of the managerial role would be expected to provide information on the state of any relevant variables in the planning process as a whole, such as information on Federal requirements or on relocation resources. This information may either constrain or advance the search and evaluation of alternatives and definitely can influence the Designer in the development of his criteria. Aside from the responsibility to bring this information to the process, the Manager is mainly the man who orchestrates the activity into a structure that produces efficiency in problem-solving and high satisfaction for participants. He is the resource man.

The Independent

The roles just described comprise the membership of the design system, that part of the social environment generally regarded as synonymous with an organizational structure and, thus, capable of being controlled and coordinated in pursuit of the goals of the process. But men outside the design system can also interact with the Designer as he solves problems. Since this is a construct that assumes the system has techniques
available for recognizing and adapting to external factors bearing on its performance and for influencing even in crude ways the actions of men when not controlling them outright, we would add two more sets of functions to the list to complete this structure of the possible social environment.

Increasingly, urban areas today tend to be planned from several directions or at several levels at the same time, with some overlap naturally resulting. While one agency prepares an urban renewal plan for a given slice of geography, another develops a metropolitan recreation plan which affects that slice to a greater or lesser extent, while still a third may be preparing to extend a rapid transit line or to funnel community facilities funds into the locale. The private sector contributes to this melange, too. A developer's architect, for example, generates and evaluates designs for a single building or a tiny piece of the area in which our Designer is operating. Sometimes social devices can be used to integrate his activity with the Designer's, and sometimes, as some of the designers in our cases discovered when tossed into situations of dealing with "outsiders", social control must abdicate in favor of influence techniques that, in turn, can fail to do the job too. At all times, however, the very presence of men who build transit systems or finance luxury housing makes them potential influences on the other systems they overlap. And if there is a perception of any stakes involved these men are likely to participate because, as we have said, it is too important for them not to do so.

An Independent in our system is a representative of a related design process. As such, his role in our process regardless of its importance is assumed to be secondary to the one he plays elsewhere. His functions lie primarily with information, data on the elements of design as they characterize and shape his work. This is extremely
valuable information for our Designer, as are the data he can offer Independents in exchange for it. The careful integration of otherwise disparate and unilateral decisions affecting urban form is the object of this interaction, and rational organizational systems would naturally install devices to encourage it. The Independent is akin to the Client, but differs in his greater autonomy, the probability that he will share fewer goals of the group, and the likelihood that he may exercise some decision-making power as a function of his role. His cooperation is not always guaranteed, making persuasion and bargaining critical social techniques in dealing with him. At times, his assistance may not even be expected.

**Custodians**

It often happens that people or groups with important things on their minds invade the design process but stand apart from either the central design system or an overlapping system. These people or groups are not making policy in the same sense as others in the social environment, but they are eager to influence those who do. Like Independents they are not directly controllable, but unlike Independents they do not normally control other design systems and, thus, do not usually have the capacity for unilateral decision-making of direct relevance. Many of them beg for clienthood but do it in almost all systems and, thus, succeed in remaining outside of most. This variant role of the Custodian in the social environment belongs to the guardians of the general culture --the conservationists, preservationists, professional societies, clean-air clubs, anti-noise groups, pro-integration groups, student activists, and people worried about everything from natural ecology to vice in the urban complex. Theirs is an interesting occupation: they serve as watchdogs over the development of urban form policy no
matter where it occurs, simply because their mission is often too ubiquitous to be geographically associated with any particular part of the urban landscape. They are unrooted Custodians.

The occupant of this Custodian role usually stands naked in the social environment, so far as his motives for being there are concerned, for he is typically clear and unequivocal about the values he is out to promote or protect. His social or political weight may be something else again, for it can be difficult to assess the general popularity of his mission or the numerical or financial backing he has. Many Custodians are embodied in highly organized and self-perpetuating pressure groups complete with their own entrenched political lobbies and press relations. Other of these trusteeships are purely ad hoc musterings of the loyal order, created overnight for a confrontation on some issue, only to dissolve the next night, or whenever the issue is decided. And some people or groups may claim this role in the design process because they represent sub-systems of society with a host of special interests at stake, rather than because they advocate a single interest on behalf of society as a whole. In this category might fall such stalwarts as the Daughters of the American Revolution and the Sons of Italy, for example.

Politicians are a special class of this latter breed of custodian. Politicians have constituencies, and a constituency --as a brand of social sub-system-- has its own goals and values that must be promoted or shielded in urban designing. But political representatives, while their strength may be more visible because they can be rooted geographically to very small areas like wards and neighborhoods, may have more complex motives for participating in the design process, claiming that they act in the interest of all their constituents when they might well be attempting to influence urban form
policies for more personal reasons or for only a small but powerful segment of a larger electorate.

Because of the way in which we sketch the social environment, occupancy of the Custodian role can vary. Politicians, for example, are just as likely to use a Client, Decision-Maker, or Manager as an intermediary between themselves and the Designer as to seek out the Designer directly, should they choose to regard him merely as a technician in the process. Thus, many Custodians sit at the edge of the social environment as we define it here. The extent to which they enter the milieu may depend on the occupant of the Designer role himself, his assessment of how important it is to his functions to seek direct interaction with these marginal men, and his personal ability to establish these relationships. A lot may also depend on the character of the rest of his environment -- a strong Decision-Maker may prefer, and can demand, that all watchdogs deal with him directly. Finally the character or location of the problem may affect the occupancy of this role. Public design systems may attract more Custodians of a certain kind than private systems, and "important" design problems may also draw in Custodians more readily than those no one cares very much about. Regardless of tenancy, the Custodian role should be a part of the structure of roles in this mode: it is a vehicle through which certain values can enter and demand an accounting in the making and judging of design alternatives.

The Machine?

One other participant begs consideration. In this kind of model the Computer might have a direct role in the process, with a unique set of functions assigned in terms of the requirements for handling information, criteria, and design possibilities.
As the machine wasn't participating in our cases and, indeed, is not yet an active member of the urban design system in enough real situations to prescribe its functions based on any reasonably experienced impressions of them, the intriguing possibilities—and the difficulties as well—of introducing it into a relatively complex structure of interaction in a meaningful way are not yet clear to us. However, the matter is becoming increasingly more important, as is that of using the computer to simulate human roles in the process.

The Urban Design Process: An Interaction Model

We now have the ingredients to illustrate the urban design process for a single run of generating and evaluating urban form alternatives: the model of problem-solving presented earlier and this model of the roles men play when they interact to make and influence design policies and actions. In the best ideal, the process might look something like this, assuming that men are aware of a problem to be solved and that certain roles in solving it have already been assigned:

The Designer to whom the problem is entrusted would set as his first order of business the task of seeking the information and constraints that allow him to model the problem into a reasonably useful and simplified picture of the situation. All members of the social environment may interact freely at this early stage of the run.

This latter function enjoys considerable status outside of the urban design process as a means for chiding management to innovate in its techniques, for management is slowly but evidently coming to grips with the dichotomy between its established models and real interaction processes partly because of the opportunities to simulate these processes via computer technology. As an example of the imaginative use of the machine as a tool for studying quasi-social processes, see Amstutz, Computer Simulation of Competitive Market Responses, M.I.T. Press, 1967.
The various Clients have been identified and have assumed roles at the center of the structure, for their perceptions of the problem to be solved and the goals inferred are among the most relevant bits of data the Designer needs now. Specialists, meanwhile, have been studying various features of the problem and the geography, in an effort to assemble a basic catalog of technical information that will become part of the standard inventory for this problem-solving process. These people, especially the Clients, may be introducing information that varies in its clarity and consistency, and may well be a confusion of facts and values; relying on assistance from the Decision-Maker, and perhaps some Specialists, the Designer scans and sorts the information received for its relevancy and coverage. Where gaps or contradictions emerge, the Designer may send out calls for additional clarifying information. The Manager of the design system, ever mindful of the resources available for solving the problem, provides at about this time some indication of potential administrative constraints on the process. He also identifies Independents and Custodians likely to be interested in the process, or important to it, and he establishes lines of communication between the Designer and these potentially influential actors, so that exchanges of information and ideas may occur as quickly as possible. An alert Manager might also establish at this time a system for monitoring the physical problem area in the expectation that it will be changing to some extent even while this process for dealing with it is underway.

If this run of alternatives is occurring relatively early in what looks to be a lengthy design process, the interaction may be extremely loose. This is because all approaches to the problem may be of equal value for a time, since relevant goals are likely to be uncertain or non-existant. At this crude stage large amounts of information could be generated at very little cost. In later cycles, where design possibilities have gained
refinement and most criteria are well in hand, the process has gained "experience" and the search for information can have some focus to it. Only a tiny bit of information from one or two sources may be all that the Designer finds necessary to redefine the problem statement. The process restructures its communication and control devices to achieve it. As a result, the process focuses on certain key roles whose occupants are likely to have, or can acquire, the missing pieces in the puzzle.

Early in the process, however, the abstract view of the problem may remain confused because of conflicting perceptions among the various Clients, Independents, Custodians, and Specialists carrying information to the over-burdened Designer. Here may develop some vigorous interaction between Designer and Decision-Maker to straighten out the difficulties and to choose at least a rough set of workable goals. By this time the Designer has begun to accompany his search for a problem with rough, sequential alternative designs, playing crude conceptions of goals, means, and priorities against one another in the effort to arrive at some decent fits among them. He will consider the physical environment once again in a more deliberate reconnaissance aimed at discovering what these early and perhaps only partially recorded design possibilities suggest he should attempt to control. Although it may be a most casual exercise, he evaluates the opportunities for intervening in the existing urban form. Specialists --like our esker expert-- are likely to be helpful now, and Independents whose control overlaps this design system will definitely be interested in participating in the coordination and adjustment of the various relevant systems now involved. The Paying Clients would reenter with information aimed at making financially feasible the kinds of intervention that are now appearing as essential to achieving quality solutions to the problem. Naturally the Manager takes responsibility for coordinating these interactions.
The systematic search for alternatives has begun in earnest by this time. Now the Designer's creative abilities are paramount, but so is the necessity to continue the hunt for information, to set the goals in operational terms, and to develop simultaneously a systematic model for predicting the consequences of the creations that are making their explicit appearance in the process. This model is vital to the rest of the activity in any cycle of designing. The Designer has rough impressions of its content, but normally cannot clarify all features of it by himself. Once again, interactions are encouraged as the Designer feeds on an intercourse with his social environment in order to build the best possible model and the means for applying it. He will enlist Specialists to advise on its construction, to set partial criteria and, of course, to construct predictive models in the substantive areas of their expertise. Clients and Custodians, the harbingers of values, can help too, for once goals and means become explicit and are symbolically correlated in statements of physical design possibilities, these groups often know some relevant ways of measuring the connections between them and the consequences of pursuing goals with one set of means rather than another. Where a number of competing interests are involved, it may be up to the Decision-Maker to arbitrate and to put things in focus once more, by choosing among alternative criterial statements and by setting bounds on predictive models. The process is moving into its more rational phases, as men prepare to evaluate systematically the kinds of alternatives the Designer has managed to create.

Designers evaluate alternatives as they generate them, of course. Some possibilities they discard instantly for glaring defects; others a Designer may refine incessantly, and often with a fanatic vigor, to make them work, simply because they possess some extraordinary positive attributes from the Designer's point of view. It is the typical case that
this mental interplay by the image-maker is spotty, leading to partial solutions to partial problems. He has long since discovered how factoring the large complex urban area into a collection of hopefully independent sub-areas eases the cognitive strain of problem-solving, for he can attack smaller, more manageable problems and meld his partial solutions into one large and complex alternative. But the Designer has also discovered that some sub-problems are easier to solve than others, so that he builds up to his overall alternatives rather unevenly. Some alternatives may share solutions to sub-problems because these solutions seem to satisfy in all cases. Rare is the case where the Designer can generate alternatives that are distinctly different in all respects.

Sooner or later there will appear alternative solutions that are superficially neutral, or are without simple bases for quickly determining their efficacy, and evaluation must become a more systematic and explicit feature of the problem-solving process in urban design. Criteria must be ranked and priorities carefully assigned, even though rock-bottom preferences are not likely to materialize. Clients are again queried for their impressions. The views of Specialists are solicited. Custodians are given another opportunity to respond. The Designer or the Manager checks with independent systems of design for inconsistencies that might hinder the eventual implementation of a preferred alternative. But it is the Decision-Maker who looms ever more prominently in the picture as the run of generating and evaluating alternatives grinds toward its day of reckoning.

At the actual moment of choice, the Decision-Maker is the man on the spot. In various ways all participants reappear, hoping to influence the leader to choose to their benefit where unresolved issues still exist. In his choice, he may decide not to
choose, finding all displayed alternatives unacceptable. Or he may choose a combination of two or more alternatives, essentially creating a new one that other participants must now study. Or he may select one partial solution and reject the remainder of that solution. In these cases, he introduces either new information, new criteria, or special considerations in evaluation. No matter the nature of his input, it implies a recycling of the process, his feedback being the signal for new or continued work at one or another of the previous steps. Eventually, after one or a hundred more such cycles, he will choose an alternative to implement or simply dismiss the operation as a hopeless exercise, and begin afresh with new people and new ideas.

Refining the Model: The Role of this Study

This sketch of the urban design process illustrates the ideal relationship between the social environment and the urban designer's problem-solving processes. In reality, however, the Designer cannot really count on the social environment around him to remain a stable and predictable structure of regulated interactions responding to requests for technical and administrative assistance in the manner implied in this model. The social environment in which any problem solver finds himself can determine what goals, what alternatives, and what consequences are worth worrying about, and men occupy and play roles as a means of influencing these determinations, of constraining design policy to reflect certain considerations rather than others. A general model of the urban design process that identifies the role of the social environment in generating and evaluating urban form alternatives is inadequate if it fails to identify at the same time any inherent environmental constraints on these
activities, and fails to offer effective guides to the designer in predicting the appearance of these constraints in any given situation. These, of course, are the concerns of this study. As a basis for tackling these concerns, we turn away from the model at this point to face reality squarely. We will not return this way until prepared to draw some conclusions from an analysis of the constraints and parameters that operated in two typical cases of the urban design process. In the interim, however, much will be said about the way men solve urban design problems that leads us to believe that the social situation is a far more critical feature of the design process than even designers may realize.
Urban design problems cannot be solved satisfactorily without interchanges of information, criteria, and design possibilities between the problem-solver and his social environment. The design process is no mere Gordian contrivance of intellect and intuition, of calculations and eurekas buried within the individual without apparent resort or response to an external world. It is a process with an "outside" as well as an "inside", and whether it be by alliance or imbroglio, the two sides stand in some necessary relation to each other.

But for one to understand the characteristics of the designer's milieu, one must search out its broader antecedents first, because the overall social, political and cultural context with its roots set deep in a history full of acts of men and of God condition very much the outlook of the immediate social environment in which designers must approach a specific array of problems. This context houses the independent variables in the way men interact in solving design problems. In this study it is Boston, and a sketch of the city as an arena for making policy for a quarter of its downtown and a tenth of its harborside draws from a multitude of determinants of the local culture, from its history and geography through the tax rate and the Irish. Even where limits are imposed to exclude factors extraneous to a brace of relatively confined cases, the task does not become scrimshaw work,
Unfortunately.

Matters can be ordered somewhat if we purposely retreat from the aphorism that Boston means many things to many people. This clearly bears witness to the diversity of this old city with its face both buried in and emerging from the annals of American history, testimony to the love affairs with it and the almost pathological hatreds of it.1 But this is almost too trivial to help in understanding it as a place neither to be loved nor despised but merely to be lived in and, given some of its shortcomings, lived with. To provide a reasonable background for the cases we prefer that Boston mean only a few things to readers: we want to establish a certain image here that is accurate and revealing but constricted. It is a portrait of the city as it turned the corner into the present decade, and one accounting for those aspects that our cases imply conditioned certain behaviors and decisions that we could not always account for through interviews and written records.

Three Definitions of Boston: Closing out the Fifties

We select three interlocking definitions of Boston as apt, though they seem to imply independent variables abiding by a peculiar Kantian logic that runs something like this: (1) we exist, therefore we are profuse; (2) we need, therefore we do not

1The distaste for Boston, rarely chronicled in the folklore of present day public relations, has run very deep, even to the normally inviolate visual appeal of older sections of town that Bostonians are so proud of. Witness Louis Sullivan, the great architect, who found that Boston, with "its many crooked streets, its filthy streets; lined with stupid houses crowded together shoulder-to-shoulder, like selfish hogs upon these trough-like lanes, irritated him, suffocated him" whenever he was forced to visit there as a child. (White and White, The Intellectual Versus The City, Harvard University Press, 1964, p. 175.)
want; (3) we plan, therefore we fail. When pervasive traditions are accounted for
--and even Henry James, not one known to be sensitive to history, acknowledged
that history has always been with Boston-- one cannot fail to see that the logic is
disturbingly sound, for as the Boston of the late fifties prepared to undergo a face-
lifting unparalleled for a community of its size, it did so mindful that ancestral
Boston had often achieved equivalently mighty changes, but each time with some
costs in integrity, resources, and confidence that have accumulated until the
present day, leading a skeptical citizenry to wonder if there were enough of these
ingredients left to try it all one more time. At the time of the popularization of
urban renewal in the rest of America, the city floundered under the weight of a
complicated and burdensome legacy, three features of which seem to have been
particularly meaningful in creating the conditions for importing renewal into the
local scene.

(1) Boston may be defined as a social-political enterprise the whole of which
is less than the sum of its parts.

Boston began its career on this continent with physical barriers that discouraged
natural and coordinated growth patterns. Shawmut, the original town and now the
heart of the expanded central city, was just about an island except for a narrow
band of land tethering it to the Roxbury mainland. Charlestown lay across a body
of water not quite large enough to deter the British from crossing in force in quest
of Bunker Hill, but large enough to assist in keeping that district a distinct urban
colony ever since. And mud flats, saltmarshes, and tidal coves defiantly interrupted
the land and the opportunities for continuous development at every turn. Boston
FIGURE 2. -- LANDFILL IN BOSTON, 1630 TO 1960
overcame most of the unfavorable relationships of land and sea through a series of remarkable landfill projects that, indeed, is still in process in the Fort Point Channel and East Boston. So skilled and confident in its ability to encroach upon an often reluctant seascape is Boston that ambitious plans for joining harbor islands to one another and to the mainland are among future plans for continuing this eternal behavior. Yet each new project was not without its scandal, its insensibilities, and its chaotic planning, to the extent that many citizens have come to regard these as the customary accoutrements of physical change in Boston, even in these days.

Creating new land also served, paradoxically, to create new "islands" -- pockets of development joined physically but not psychologically to the existing city. The Back Bay naturally ranks as the City's most ambitious land project, not counting Logan International Airport almost a century later, and is also the striking example of the manner in which the affluent Bostonians eagerly joined in what was clearly a forerunner of the contemporary flight to the suburbs. The Back Bay became the camp of the elite well before the entire Mill Pond on which it was built was filled. And the migration was not a slow-paced, evolving phenomenon but a wholesale desertion of older parts of the city by an entire social sub-system, complete with its institutions and churches.

Mostly they came from the South End, itself partly rescued from the sea a generation and a half earlier. The affluent Yankees fled not from a South End

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The process by which Boston has managed to fit herself into the sea around her is the great saga of the city, told no better than by Walter Muir Whitehill in Boston: A Topographical History (The Belknap Press, 1959) who eloquently documents the intimacy between the social and the physical changes in the city.
suffering a physical deterioration; they moved from what they believed was imminent social chaos, as waves of newcomers found their way to Boston just as to New York and Philadelphia at approximately the same time. The railroads bringing enough commerce eastward to warrant filling in the Old South Cove for marshalling yards in the 1830's created concurrently the present Chinatown, and helped to stock it; the Irish crowded into the North End and Waterfront tenements by the thousands in the decades on either side of the middle of the nineteenth century, themselves to flee a generation later to preserve their new-found social status in the face of the latecoming Italian invasion of the city. Indeed, one is led to believe that among the three thousand redcoats who stormed and took the heights adjoining Bunker Hill that day in 1775 may well have been the last Protestants to inhabit Charles town in large numbers, for that district is, and has been for well over a century, exclusively Irish Catholic in composition.

Irish, Italian, Jew, Negro -- Boston has grudgingly accepted them all, but not to make her a city so much as a series of ethnic encampments united by little more than a common water supply system. Other cities have shared this developmental experience but Boston in turn cannot rightfully share with her sisters many accolades for achieving that next great step in the building of the American urban social structure, namely, becoming one of those "melting pots" where the detrimental attributes of ethnic development gradually evaporate, to be replaced by the more positive ones. From the Irish, with numerical strength, to the Yankees, with their economic power, to the Negroes, with little more these days than the right to live, the people of Boston still tend to come together in the common objective of going their separate ways. "The Boston social system," one observer writes, "is marked
by extreme cultural fragmentation and strongly rooted group identifications. As a result social integration is at a low level in Boston. The divisions are along both class and ethnic lines."

The waters in which social-economic factionalism is reflected are political in their chemistry. Ethnic politics prevail in the community and, simply because ethnic voter strength is dispersed into separate concentrations across the city from East Boston to Mattapan, Boston politicians still garner support on a ward basis, although at-large city council elections have been in force here for a number of years. Yet the system falls short of conforming to the conventional image of ward politics because practically no patronage or local power is disbursed through it. Consequently, political organizations --machines-- remain undernourished, while politicians grow more and more independent of each other in search of personal followings that have to be constructed on the basis of issues rather than favors. Because issues can be manufactured, there are likely to be as many of them as there are aspiring politicians in the Boston community though, as we shall see shortly, it is possible for one side of an issue to be so universally and unanimously advocated that the issue ceases to exist and Boston becomes witness instead to its metamorphosis into an obsession.

Ethnic politics has been the local game for generations, but the rules for playing it are everchanging. In fact, the case studies of the next two chapters

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occurred at a time when one set of rules was replacing another, so that either set had validity to some extent and were scorned to an equivalent extent, forcing the actors in our urban design processes to juggle two scripts as they played out their roles. The waning philosophy was what Arnone labeled "working class authoritarianism"; a political mentality acculturated to the manner in which Boston politicians attempt to raise and to resolve the issues with which they seek identity—and votes. Preferences for simple stereotype solutions and immediate personal benefits characterize the system, as do perceptions favorable to reinforcing the individualized, charismatic nature of local government over the impersonal and dispassionate rule through bureaucratic agencies by which government—including urban redevelopment—functions.

This was the philosophy of the Irish and the Italians, a political culture suited to the needs and fears of the favored political majority. The politically oppressed confronted this system with its alternative at the beginning of this decade just as it is doing here in the closing days. The phenomenon was the same; the actors, however, were very different than now, for it was the Yankee rather than the Negro who was opting for new rules to the game. Unlike the Negro, the proper Bostonian had the economic power to effect his rules and play accordingly, even if no one were looking. Banfield and Wilson point out that it was a status game, differing from ethnic politics in "its emphasis on the obligation of the individual to participate in public affairs and to seek the good of the community as a whole."

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5 Arnone, op. cit., p. 20.

6 Banfield and Wilson, op. cit., p. 41.
To the working class this was merely a euphemistic disguise for the continuing efforts of the elite to gain political control of Boston, something denied to them ever since the invention of the Democratic Party. But the economic strength of the Establishment cannot be denied, and as it alone could grant anything resembling patronage in the city, it gradually eroded the strength of the old political culture until, at the beginning of the sixties, politics in Boston looked like a Mexican standoff.

If the internal social and political fragmentation into which a new city administration proposed to launch a massive urban renewal program in 1960 wasn't depressing enough, one need only consider Boston's external relationships to complete a gloomy picture. The city harbors the seat of state government but not its sentiment. Boston is a creature of the state, almost like a house pet dependent on the benevolence of its owner for sustenance. Of course the unpredictable nature of local politics and administration creates some justification for the higher authority's attempts to influence and control policies in areas like public education and welfare, but it does not follow that a well-intentioned State government is automatically a competent one. Boston does not have confidence, for example, in the Massachusetts Department of Commerce and Development to assist intelligently in local renewal efforts, and local officials simply refuse to trust the state's Department of Public Works to act rationally anywhere within the city limits.

Where neither city nor state can scale up or down to face Boston's problems, both can turn to those monoliths of modern public administration, the independent functional authorities. The Massachusetts Port Authority and the Metropolitan District Commission (for public services ranging from sewerage to parkways) are
omnipresent wedges into the local political structure, along with perhaps a half dozen other autonomous and far-reaching agencies. The City shares with these extra governments the power to plan, to take, and to build, but with few special agreements among the various parties to act beyond the close confines of individual self-interest. One might generate and evaluate urban form alternatives at City Hall with a total sense of disregard for the rest of the public decision-making web, but one surely does not expect to implement many such unmindful policies. And history has taught Boston the axiom that, as the actions and reactions of other levels or layers of government are difficult to predict, it must just assume responses will be negative and start negotiating from there.

It is not very clear why Boston continues to exist in a state of profusion as well as confusion, but it doesn't really matter here, for the participants in the cases to be documented never meant for their involvements to suffer changes in the fundamental social and political fabric of the City. The climate, the fragmentation of power and of social values, was merely a caveat governing the making of one's decisions and the assessing of those made by one's neighbors. In 1960, it must also be remembered, men began to guard with even more evident vigor their separate values and slices of power for, like redcoats and rednecks in centuries past, newcomers with new and different ideas and weapons were appearing in town, this time proposing to redevelop it all in quest of something they called "the new Boston".

(2) Boston may be defined as a reluctant ascetic, whose needs outstrip its wants, more out of surrender than devotion to an abstemious life.

Put more pointedly, Boston was in deep trouble with its tax base throughout the fifties and nothing about the immediate future encouraged the City to think the
sixties would yield some magical way out of its imponderable and perennial economic crisis. From 1930 to 1960, the city raised its tax rate from $31 per thousand dollars of assessed valuation to close to $100, and currently the rate-makers are flirting with figures above $120. But in 1930 real estate valuations totalled about $1.8 billion; in 1960 they were almost half a billion dollars less.

In 1959 Boston was a city of almost 700,000 people, many of whom would have joined in the flight to the suburbs that had lured a hundred thousand of their brethren in the previous decade, if only they could have afforded it. They stayed--in dwelling units aging rapidly and under landlords who, no longer able to command a bullish position in the real estate market, saw little hope for countering outward migration through investments in the rehabilitation and upkeep of their residential property. Boston would not, in the sixties, be able to look to its residential stock as a source of new tax dollars. The industrial picture was dimmer. Over 24,000 new jobs were created on or in sight of Route 128 (15 miles outside the city) by the end of 1960, and almost 17,000 were jobs in companies previously located in Boston and in its neighbors Cambridge, Quincy, and Somerville. At least a third, we can assume, fled from Boston proper just to this location, and the prospects of more moving there and to elsewhere in the metropolitan area were awesomely real. Meanwhile, not many firms were moving intown. The commercial real estate situation, to round out the picture, was equally serious at the end of the fifties, as Boston was clearly slipping into the snare of competition from her upstart suburbs for her former residents who, by eagerly facing the prospects of gleaming shopping centers, were turning their backs.

7 The statistics are as published in the December, 1960, issue of Industry, the magazine of the Associated Industries of Massachusetts.
to the central city.

If these facts generated despair, it was indeed a source of outright irritation that fully one third of Boston property went tax free and the only tangible growth sector in the local economy in 1960 was among the tax-exempt institutions, feverishly adding more land to their private fiefdoms. For example, the Back Bay, once a financial asset to the city, was well on the way to becoming the home of many small schools and colleges and, through inexpensive conversion of once-stately town houses, housing for over 10,000 students. The pride of Boston is its international role in education and medicine; the price for maintaining that image is, ironically, reflected in the poor quality of education and social services it offers its own citizens. In 1960, with the economic and social changes in the metropolitan area victimizing Boston, the city was being starved to death.

This was the obsession. No local political figure could safely campaign for any program, any service, any benefit that threatened to plunge the city further into its vortex of economic despair. At the same time no politician could deny the tremendous needs, but the shifting political mentality was quick to recognize that there were no simple solutions and, thus, relieved pressure on local leaders to propose them. Thus, even the basics of urban life began to appear to Bostonians as outrageous luxuries, a very useful perception for it permitted the city to believe that it wouldn't starve to death just by abstaining from dessert. So the schools, roads, recreational facilities, and welfare services stood still at best. But the tax rate continued to climb. As the decade of the fifties closed, Boston resignedly looked forward to another lean ten years, a city tragically giving currency to Henry Adams' description of it a century earlier as a city with no strong convictions but no strong wants either.

Urban renewal did not really weaken the obsession with the tax rate; renewal merely
appeared as the only strategy on the horizon that might cheerfully accept the challenge of giving Boston something for nothing as the principal operating rule. This was an implicit goal of ensuing programs, the condition under which a new Mayor assumed office, a new impersonal agency was permitted into the city, and a marriage with yet another level of government --Washington-- was consummated in earnest. 8 Even the wise ones who knew that they couldn't get something for nothing were prepared to try, simply because, in a city of political games, maybe the effort might lead to new rules that could tip the weight of the political system more favorably in their direction in the sixties. 9

(3) Boston may be defined in 1960 as a system of decision-making organized on the principle that the capacity to plan and the capacity to act are identical, and insofar as action by the city in solving its problems was worthless, public planning was an

8 It must be noted that the idea of federally-aided redevelopment did not suddenly appear in Boston in 1960. Three projects actually were underway at the turn of the decade, one of them being the wholesale clearance of the West End neighborhood, the other two being considerably smaller. And the vast Government Center project was moving rapidly toward implementation. But the idea appeared novel in 1960 for two reasons. First, it was apparent that proponents of renewal conceived of a mammoth effort toughing everyone in the city sooner or later. Second, no one had really stopped to study how generous the Federal government had been elsewhere in the country in support of ambitious renewal efforts. In 1960 Boston was the 10th largest city in the country but ranked 27th in capital grant reservations for redevelopment, so it became clear that a massive renewal program might be made feasible simply by beating a wider path to Washington.

9 In Boston's residential rehabilitation projects, at least, it soon became evident what the price for 'free' urban services and community facilities might be and how the rehabilitation game would be played. Keyes describes rehabilitation in three Boston neighborhoods as a process where the city desired commitments of local support of the renewal plan and of private investment in the neighborhoods in return for publicly provided services and facilities, thus establishing the conditions for bargaining in which the character and distribution of local power became important elements. (Keyes, The Rehabilitation Planning Game: A Study in the Diversity of Neighborhood, unpublished Ph.D. dissertation, M.I.T., February, 1967.)
equally worthless undertaking.

"The trouble," some believe, "is not with Boston but with the rest of the country. It has been moving steadily away from Boston for more than a century."\(^\text{10}\) In the uncertain world of public policy formulation it is not too difficult to blame failure on unforseen and uncontrollable external factors, easier at times than attempting to minimize their impact by acknowledging and considering them in the course of the planning process. Taking the easy way out serves an objective, aside from excusing incompetence. It helps to reinforce a desired image of a community as a reputable and viable entity or, in other words, it clouds for practical purposes certain distinctions between truth and fiction, should the truth damage an aura of optimism about an urban place necessary for attracting and keeping people and money there. City planners have become socially conditioned to think optimistically about their cities, recognizing that any other public attitude may constrain political expediency and may, in the end, cost them their jobs. And while public policy is often directed toward the goals of attracting human and financial capital, public criticism is often directed away from such policy should it fail, for fear not only of the political consequences of admitting to incompetent policies but also of the consequences of having to admit that the goals themselves are practically unattainable. It must have been easier, even in 1820, to blame the gradual demise of the port of Boston on the failure of "someone out there" to construct bridges across the Hudson River than to admit that no number of bridges may have saved a city that no longer held a competitive advantage in sea trading.

Believing that external forces control local destinies serves ultimately to make the

case against planning, and Boston has had more time and more reason to nurture this belief than most other cities on this continent. Even where planning has been successful it is not the city so much as private development and the independent functional authorities that have created the land, the parks, the roads, and the transit system that evidence what can be done given the capacity to act. It has, to a large extent, been the forms of government basically incompatible with the local brand of politics that has dealt effectively with charting and navigating courses into the future. As Boston moved out of the fifties, it was genuinely pessimistic about how effectively it could act and, therefore, how usefully it could plan for the future. Indeed, as the rest of the city watched the demolition of the West End and received the prophecy of a Government Center, many wondered if the dreams would ever become realities. It was an unease that the City's planners --its professional optimists-- never really acknowledged. The Boston Planning Board in the late fifties demonstrated that it could make plans, though it was often the Board's fate that the City came to regard the effort as pageantry instead.

In order to feel secure in its ability to plan, Boston had to have confidence in its power to make plans come true. The city had to be guaranteed the feasibility of plans, not the desirability, and if feasible plans meant little plans, then Boston would have little plans. When it became apparent that big plans were its salvation, Boston simply wanted bigger guarantees rather than greater risks. And, of course, nothing --big or little-- could cost the city money.

The New Administration: Entering the Sixties

These definitions of Boston imply serious obstacles in the path of the city as it prepared to enter a new decade, almost an impossible challenge to those foolish enough to face it
squarely. John Collins won the dubious right to pick up the gauntlet when he was elected Mayor on a platform that focussed on "revitalizing" the city. But Collins, hardly a modern-day Lycurgus, accepted the very factors just described and knew even before he moved into City Hall that this was a job for professionals, for the thick-skinned, for men with strong wills and maybe a friend or two in Washington, just in case. Mostly, however, Collins believed that Boston needed a man with credentials and proved ability to reorganize the stalled renewal programs of the fifties and to get new ones going. It was to Edward Logue, the renewal chief who forged a successful program in New Haven, that he turned.

Edward Logue is not the kind of man to inspire neutral impressions or reactions. In a seven-year tenure in Boston he was to command the complete confidence of his boss, the unquestioned loyalty of most of his staff, and considerable admiration from the business community. On the other hand, many private developers privately despised him, neighborhood groups couldn't wait for his departure, and the City Council chamber reverberated from the rhetoric unleashed in countless confrontations between Logue and men who took every opportunity to denigrate him and the brazen philosophy that would rebuild cities overnight. No matter the intensity of affections and enmities he generated, Logue was clearly the force that gave personality to Boston's 90-million dollar resurgence. One cannot exclude him from any discussion of urban renewal in the "hub of the universe" for, indeed, he more than the Mayor was to be the linchpin in the hub for close to seven years.

It needn't have been that way, however, if Logue had not actively sought to consolidate development programs and decision-making under his aegis. In all probability he would have rejected Collins' invitation to Boston if he were unable to strike a rather sensible
bargain that focussed on the trio of factors that heretofore had conditioned the city to regard planning and redevelopment as threatening, expensive, and fruitless. Logue would guarantee the city that urban renewal would cost her no noney, and he would further guarantee to build what he planned to build. In return for this, Boston was asked to forego the kinds of claims a fragmented political system normally makes on a governmental function and to centralize in independent hands all planning and development activities which, of course, Logue would administer. That Logue could muster a massive renewal program in Boston is largely attributable to the creation of the Boston Redevelopment Authority --built largely out of the old planning board but with functions that extended to zoning and renewal. With a weak board of directors above him and a strong professional staff below, Logue, as Development Administrator, was soon to become almost technically and politically untouchable by the Boston political system (though not verbally insulated from it), free to decide and to innovate in fulfilling his part of the bargain. Many times his system failed him, and at other times he could not meet the City's challenges (witness the still-spiraling tax rate), but for the most part Logue managed to control the performance of urban renewal from the moment he took office, juggling gingerly the volatile components that served to define the situation that confronted him on his arrival.

In 1960 Boston stood at the threshold of urban redevelopment with an image of the future distinguished not so much by its particular content as its quality of pessimism and lack of imagination. That the image was not totally self-fulfilling can be attributed to a citizenry plastic enough to want a new outlook and some men providing more than

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11 For a thorough account and evaluation of the operation of the Boston Redevelopment Authority in the context of its formal and informal organizational structures, see Arnone, op. cit.
blithe propaganda in support of it. The outlook was simply that for the first time the means for rebuilding the city might also restore more integrity, resources, and confidence than they would sap in the process. Nobody knew for sure if this would be true and nobody will know until the final analysis is in. That the program was begun is just simple evidence that Boston may have crossed the threshold purely on faith.
CHAPTER THREE

THE CENTRAL BUSINESS DISTRICT PROJECT

John T. Howard, we are told, once defined a region to be "an appropriate area", an interpretation which somehow seems to endure for planning purposes where more absolute explications falter. The same kind of horse sense has its place in attempting to justify the boundaries of the Boston Central Business District Renewal Project in the face of several alternative delineations that can be used. The BRA's Central Business District of 245 acres is not to be confused with the old Planning Board's CBD of 875 acres, stretching in an angular crescent around the Boston Common from the West End almost to the Fenway. This, in turn, is only an effigy of the area that the Greater Boston Economic Study Committee decided to use in its series of studies of the early sixties, a patch on the peninsula of about 770 acres of the most intensive concentration of uses and activities northeast of New York City. If the BRA had considered identifying a CBD according to some common sidewalk perceptions of it, it might have chosen to include the financial district, which it does not, and omit the tract of industrial land behind South Station, which it likewise does not.

Our case, it appears, deals with a narrowly-described CBD and, whatever it is not, it is an area appropriate to the size of study the BRA could discharge in the center of Boston within the limits of its resources, and within the mosaic of action programs developing in the agency at the time. The CBD, then, is not so much a physically accurate definition as it is a simple and deliberate administrative distinction between this particular collection
of blocks, streets, and buildings and any of the others which eventually could become manageable renewal project areas in Boston's oddly-shaped "downtown." It might have been more consistent and less confusing if the project were called "Downtown Central," or "Retail-Entertainment Area," or "South of Common," but considering what was at stake --namely, a pivotal area in the attempt to maintain the economic viability of central Boston-- these precise definitions were far too prosaic. Calling these 245 acres the Central Business District when they represent to many observers approximately a quarter of the real CBD was psychologically appropriate to the BRA's strategy for gaining support and enthusiasm where $300 million of private development funds were needed to carry out the plan proposals.

Characteristics of the Project Area

If there is something equivocal in the name assigned to the project, it should not imply that the urban design problems involved were any less real and significant. Within the project boundaries is a variegated pattern of uses, activities, environmental conditions, and even social divisions, which seems to change continuously, a step or two ahead of the information available to comprehend it. It is virtually impossible to keep track of what is happening to over 30 million square feet of floor space parceled among 7,000 business, of what 100,000 people are doing or would like to do every day, of where almost 600 commercial service vehicles are at any given time, or, to take an extreme, of how the traffic flow is affected by the erratic driving behavior of 3000 short-term visitors to the area at the peak hour, competing for 900 (legal) curb parking spaces. Nothing in the CBD seems to stand still long enough to permit any rational assessment of the systems that are operating to produce the problems that exist. In truth, it is hard at times to
FIGURE 3. -- MAP OF THE CENTRAL BUSINESS DISTRICT IN 1960
distinguish real problems from imagined ones, much less assign any priority among them. Among the things we shall try to make clear through this case is that design strategies can reflect the difficulty of coming to grips with the problem and that sometimes it is better to abandon John Ruskin's aphorism about defining a problem first, in favor of defining solutions most likely to satisfy a range of possible problem interpretations.

The project area centered economically on Boston's "100% corner", the intersection of Washington Street and, in typical Boston fashion, a street known as Winter Street as it comes into the corner from the north and Summer Street as it exits south for destinations like the massive South Station railroad terminal. The City's trio of large department stores shares space on the corner above a key crossing of subway lines, and at almost any time of the year human activity bustles at the corner as people jostle for elbow room on the narrow streets and sidewalks that are very definitely "public" rights-of-way winding among some very private properties. Fanning out from this seat of the local retail economy, one embarks on an adventure in disorientation. It's not so bad going northwest toward the slightly quieter Tremont Street, for the Boston Common is always there on the other side, cheek-to-cheek with the project area along most of this boundary, a garrison from which both pigeons and people make regular forays to the CBD. Even an excursion "up" Washington Street--which means moving into the lower street numbers--is not troublesome, until one saunters off the street in search of the old City Hall or any particular office building or restaurant hide-a-way in the area.

The CBD becomes a more confusing phenomenon in its outback, the areas bordering lower Washington Street and those sandwiched between the shopping and financial districts. Here the uses become more specialized, from furriers to theaters to Chinese groceries to honky-tonks, and not too many of these areas are aesthetically appealing, even by
grocery store or honky-tonk standards. Driving isn't much fun either: like crossing the fault line of some man-made earthquake a street may jog as it crosses another, and everything seems to be one way the wrong way.

Sub-areas are more or less identifiable. Legitimate theaters and first-run movie houses congregate on lower --or is it upper-- Tremont near Boylston Street, at the point where the CBD shifts directions to an east-west axis to meet and marry the newer parts of the downtown core. The blocks between Tremont and Washington Streets house innumerable small retail establishments catering to throngs of pedestrians who seem to have one of two objectives in mind: when on Washington, to get to Tremont; and when on Tremont, to get back to Washington. Elsewhere, a Chinatown can be readily identified, as can a small apparel-making district. But sub-areas of the CBD are just as distinguishable for what they are not like. In general, the project area is not a sophisticated melange of retail and office uses. Bonwit Teller's and Brooks Brothers are not here, and one certainly would not come to the CBD to purchase art, for Boston's galleries are elsewhere in town. However, it was not entirely to construct a new image of the area that men came together to make designs in 1962; it was, among other things, to shore up the existing one.

**Prior Design Efforts in the CBD**

Designing the CBD was certainly not without precedent in Boston. By 1962, for that matter, the evidence was already in on the results of implementing some earlier design proposals, and this evidence was of keen importance to the form that future design possibilities might take. Boston, in the late fifties, suffered a malaise from the trend toward suburbanization of the retail dollar. Shopping centers, suckled by newer and better roads, made incursions to the extent that, by 1958, the entire downtown captured
15.9 percent of retail sales in the Metropolitan area, as compared with 20.1 percent in 1950, and it was still declining. The discomforting situation was not unique to Boston, of course, it being one of the characteristic urban dilemmas of that decade at least. Potential solutions were not unique to Boston, either, and a 1958 experiment with pedestrian malls in the CBD area was strictly a borrowed design concept. The failure of the Temple Place and West Street malls to improve the economic position of the CBD was a discouraging legacy for some of the urban renewal designers, who interpreted the evidence to mean that, while one might concede an environmental improvement to the area, malls were hardly a magnet in themselves for attracting more people downtown. But the idea of pedestrian malls would always be present in the post-1962 design process, though the degree of loyalty to it would vary among participants, depending in part on how seriously the prior experience was taken.

The mall experiment, however its failure was interpreted, stood as an unusual and estimable enclosure in the dossier on the CBD handed to participants in the design process in 1962. A more conventional kind of intelligence—the stock of prior, but unimplemented, planning proposals with an assortment of data, analyses, projections and evaluations—was also present, synthesized largely in A General Plan for the Central Business District, one of the last documents published by the fading Boston City Planning Board before the

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1 Downtown's share slipped to 13.7 percent in 1963, and it was projected to continue a downward trend until 1975—the target for completing the CBD renewal project. Thus, the CBD planning was never intended to help Boston recoup its percentage share of consumer dollars. However, total retail sales in the region were projected to rise so that, by 1975, the Downtown situation would actually improve, since it would be sharing in many more dollars of metropolitan business. Figures from Victor Gruen Associates, Inc., Boston Central Business District Planning Report, October 30, 1967, p. 34.
birth of the BRA. It was a plan for the 875-acre conception of the CBD, and relied heavily on strengthening the existing general pattern of a lineal procession of predominant use sub-areas which characterizes to most people the structure of Boston's core facilities. It sought, therefore, to bring together related activities, separate incompatible ones, and conserve whatever was "sound" in the troubled downtown. These were about the only real specifics to which the plan was committed that made a reader aware of a plan to be used in Boston and nowhere else. Otherwise, its goals were stated at very general levels, and were of the common household variety not unlike what other cities might adopt as their planning aims in their central areas.

Downtown Boston was viewed as a planning problem in this study, and inheritors of the proposals at the BRA claim it provided very slim guidelines for implementation. For example, the plan allegedly fell short of providing a practical solution to the trucking and off-street loading problem in the narrow, curving streets of the retail area. Yet knowledge of its intimate deficiencies is not needed to question the plan's efficacy. Its success depended mightily on broader, more evident factors obviously beyond the control of the planners, the City, and the businessmen and users of the area. By its own admission, the plan required the construction of the Inner Belt, but this loop surrounding the regional core is still unbuilt and likely to remain so for several years to come. The plan also asserted that any extension of the Massachusetts Turnpike into the heart of downtown would be injurious to the goals for the area and inconsistent with the Inner Belt concept. The traffic it would bring would not be adrenalin for the center, but would instead further congest it. Despite this plea, the Turnpike Authority constructed its 14-mile extension

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2 Published in 1960.
FIGURE 4. -- FUNCTIONAL SUB-DIVISIONS OF CENTRAL BOSTON AS CONCEIVED BY THE BOSTON CITY PLANNING BOARD IN 1960
from the suburbs to South Station, and this toll road opened in 1964.

Aside from risky foundations, there was an aura of optimism about the plan. A feeling prevailed that there was something inexorable about the Boston CBD, that its situation was bound to improve, and implementation of the planning proposals would take care of itself. The document, it seems, had a prophetic intent, and its practical utility rested mainly in the degree to which its authors believed planning proposals to be self-fulfilling.

A General Plan for the Central Business District did not succeed in stimulating action, for Boston was immune to such plans. Instead, it became the seed for the kind of planning that would. Its epilogue was not only the BRA's Plan for the Regional Core, but also the Downtown General Neighborhood Renewal Plan (GNRP), which established the series of urban renewal projects of which the 245-acre CBD is one. A comparison of the old plan with the results of the design process we will examine shows some similarity in concept, suggesting that segments of the BRA renewal effort are based on a refinement of the work of the old Planning Board staff. It is probably true that some current ideas can be traced back to the late fifties, especially some of the elements of the pedestrian circulation system, a truck service tunnel, and certain features of the network of parking facilities. But to suggest a technical continuity in the CBD design process is false. The designers' perceptions of many of the problems changed drastically by 1967, yet the range of feasible solutions remained more or less the same. Thus, the similarity in plans is in part superficial, the result of being forced to recommend the same means over and over again, and to justify them in the face of changing information and criteria. But some consistency is there because prior

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The GNRP set the area at 159 acres. There were subsequent revisions and amendments to include, among other things, a stadium site at the terminus of the Turnpike.
plans, as a source of information, criteria, and design possibilities, play a peculiar role in the process, which can be as politically strategic as it is substantive, a point to which we shall return in our later analysis.

Establishing A Client: the CCBD

While it may never be known if the plan was the catalyst, one element of the 1960 proposals was implemented as a prelude to embarking on urban renewal. Numerous organizations with interests in the CBD already existed, and the plan suggested that they should all be represented on a CBD development corporation, established to spark interest and investment in the area, to sponsor planning, and to represent one half of the kind of private-public alliance that had become desirable in legitimizing urban renewal by that time. Logue and Mayor Collins had always wanted some local group to give the CBD its dimension of citizen participation, but elected initially to convince one of the existing organizations to carry the ball, much the way Collins had solicited the Chamber of Commerce to simulate the role of the private sector in the Waterfront-Faneuil Hall Project two years earlier. After approaching the Retail Trade Board, and then the "Vault, it became evident that local businessmen preferred the creation of the type of

The "Vault" is a little-known group of the most influential of Boston's entrepreneurs, so named because it meets in a basement conference room of the Boston Safe Deposit & Trust Company. A microcosm of The Establishment, it represents a point of interface between politics and economics in Boston that, as far as we can determine, has never really been integrated into studies of political influence in the community. Walter McQuade identifies the group in his discussion of renewal in Boston, but refrains from speculating on its role in the process (in Wilson, ed., Urban Renewal: The Record and the Controversy, Harvard University Press, 1965, pp. 265-266). As a result, we can only take the word of one interviewee who contends that the Vault never participated in the CBD design process, once it passed from its hands, although it is obvious that individual members of the elite group remained very active through the process.
organization envisaged in the 1960 plan, possibly due to the unwillingness of established groups to enter unilaterally into the kinds of uncertainties surrounding Boston's urban renewal program at that time. Whatever the reasons, the City obliged, and from the business community emerged, in June, 1962, the Committee for the Central Business District, Incorporated (CCBD).

The CCBD includes 75 members of the downtown community, directly representing individual private enterprises of all kinds. Its 33-man board of directors contains no less than 26 men with the rank of chairman or chief executive officer in their respective companies. It is an awesome and prestigious sampling of the Boston Establishment. Yet, quite suddenly, it found itself sharing with the corner grocer in Washington Park and the Baptist congregation in the South End the similar and personal problems of how to cope with urban renewal when it makes its appearance in the "neighborhood." While there were clear differences in the amount of political power and influence it could muster, the CCBD was not much better educated, at the beginning, to the intricacies of the renewal process than the Boston proletariat. This doesn't mean the group was unenthusiastic, as often was the case elsewhere in the City; it was likely to be receptive and polite at the same time it was conservative and wary.

Other Participants

At the BRA, Logue was filling other roles in the process. He placed Robert Hazen in the key position of project director, and assigned Tunney Lee to be the project designer. Richard Beatty, who shortly thereafter fulfilled a liason role initially became the project's chief planner which, for him, was a continuation of his already existing association with the project. Hazen had a long-standing relationship with Logue, from the old New Haven
days. Lee came to the project armed with very little prior experience in solving the kinds of problems he would face, but he compensated for this with a familiarity with the project area. He had lived much of his early life in Chinatown, at the fringe of the CBD, and had some deep attachments to the heart of Boston which he discovered shortly were not always shared by other participants in the design process.

Generally speaking, Logue did not invent any new patterns of formally organizing his human resources for the CBD process; it was identical to the structure or any other of his projects. He felt, however, that no matter how he put the pieces together he could not overcome a couple of factors which he believed were essential to the ultimate social acceptability of the effort. First, many people considered the 1958 mall experiment an outright fiasco, and viewed the public agencies involved as the culprits. If City Hall could not cope with a couple of street closings, so the reasoning went, how can they be trusted to solve the problems of the entire retail core? The failure of the malls to achieve their aims only blemished further the image of local planning that the West End project had tainted. Second, no tactics for managing the process were sufficient to overcome the simple lack of manpower. In 1962, the BRA had seven urban renewal project areas in various stages of survey and planning, a comprehensive plan underway, ten GNRP, and a host of special planning and design studies requiring staff resources. Thus, Logue felt he couldn't put together enough of a staff "in shop" to prepare plans and designs for the CBD. For political and practical reasons rather than for any peculiarities of the physical problem that his own staff couldn't handle, Logue decided that the design of the CBD should be turned over to a consultant. To cement the commitment of the downtown interests, Logue persuaded the CCBD to engage the consultant directly, and recommended a number of possibilities to the group. The businessmen responded by selecting Victor Gruen
Associates, Inc., and in August, 1962 (at about the same time the BRA mailed an application to Washington for initial survey and planning funds), the CCBD executed a substantial contract with the well-known private consulting firm. Under the agreement, Gruen would provide services in two stages. Stage I would include "research, analysis and programming and exploratory planning," and Stage II (to be partially financed by the BRA when it received the funds from Washington) required Gruen to embark on "plan refinement and adjustments, detailed sub-area planning, and the preparation of technical narrative and graphic materials." 5

Enter Victor Gruen

We can only speculate on the reasons for selecting Victor Gruen. Quite possibly, as one interviewee reported, Gruen was the only firm on Logue's list that was known to the members of the Committee. He had received considerable publicity for his designs in Fort Worth and in Rochester and, while it is fair to say that he was a controversial figure within the close confines of the design profession, his philosophy of the design of cities had a popular appeal, and he projected the image of a man who knew what it was all about when it came to untangling the problems of declining downtowns and disappearing dollars.

Victor Gruen enjoys a popular credibility, not entirely unjustified. He builds a philosophy of design on reasonable premises. 6 Even among professionals, there is little


intrinsic quarrel that the existing form of the city, a legacy from earlier times, is inadequate to service the individual and societal goals of the mid-twentieth century. The transportation "problem," for example, is more profitably phrased by its perceptive students as a problem of city form than, say, as a problem of "congestion." Among the concomitants of the inherited city, Gruen believes, is the loss of direct interaction between the individual and the physical environment. In the continuous adjustment between existing form and new technological factors, the latter, primarily in the form of the private automobile, is emerging uncontrolled, intruding on the efficacy of the "public" environment. The variety and detail of cities and of city life are succumbing to the functionalism and scale demanded by the automobile. In order to regain the lost virtues of the city and, perhaps, even to create new ones, Gruen joins with many others in stating the problem to be that of taming the automobile.

Beyond the rhetoric, one can disengage from Gruen's thesis at either of two points. First, his goals for a city form that domesticates the metal beast derive principally from two analogies that he finds valid. Historically, Gruen notes, our cities were often subjected to invasion from without and had to provide for their own defense, usually adopting a system of concentric fortified walls as the basic element in the plan. Today's phalanx of privately owned cars corresponds in Gruen's view with the armies of Huns and barbarians that threatened our ancestors and, by analogy, we must build solid defenses to ward off the new breed of attackers, defenses not unlike their predecessors. This analogy implies not the goal of simple domestication of the auto, but its total defeat and subjugation, a view that more dovish observers of this war for control of the city find unrealistic, given current public values toward private transportation.

Gruen's second analogy is the simple organic one, and he finds it convenient for
prescribing the structure and organization of the urban environment within the defense perimeter. For example, the city and its parts may be likened to an organism, and can be represented in terms of its cells and their characteristics, all functioning together in a strongly hierarchical pattern. Organic metaphors have always been controversial among planners. Detractors regard them as too simplistic to be meaningful, and generally misleading as well. The trick is in learning to recognize where the analogy ends. The organic analogy, however, has great popularity among architects, of which Gruen is one of the more distinguished in this country.

Some who agree with Victor Gruen up to this point challenge him on certain of the physical consequences of his goals. He proposes ring roads girding distinct functional areas (like a central business district), fringe parking, pedestrian malls with a Continental flavor, artificial environments, an emphasis on cultural activities, greenbelts, and complicated overlapping systems separating service, storage, mobile, and static elements and activities. This alternative model to the current world has tremendous appeal, but according to critics it entails problems of flexibility, first cost, and possibly other goals of city form. Moreover, it requires a commitment to an extreme in city-building, never really tested for how well it connects with its stated goals. The model implies a general appliability and is somewhat unclear as to what values of city life in specific cases would be sacrificed as unanticipated by-products of it. Would it mean the same for San Francisco as for Los Angeles? Some of these problems, however, are not Gruen's to solve, but reduce to

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challenges for his detractors, and only serve to accent the more general problems of theories of city form that we discussed briefly in our Introduction. Precisely how inflexible is a Gruen city? How does one measure flexibility? Are Gruen's higher first costs offset by lower maintenance costs, say over a forty-year period? If Gruen is not on a firm footing in his views, his critics are often guilty of repelling him with paper darts. But such is the current state of the art of urban design as we see it.

At the time Gruen was hired, his philosophy of urban design was reasonably well known to the CCBD, as were the various counter-arguments we have just outlined. But Gruen was impelling, and able to rise above criticism in pursuit of a serious intention to improve central cities, and he had a personal elan and recognized status needed in the Boston renewal program at that time. On the other hand, he was sure to bring with him cause for professionals and politicians alike to resurrect the Temple-West mall failure and, above all, the consequences of wide-spread surgery as manifested in the West End, a project on which Gruen was the developer's architect, incidentally.

Therefore, it was not surprising that the CCBD members, insecure bedfellows in a design process that the Boston audience had reason to regard warily, took great pains to outline carefully some of the ground rules under which Victor Gruen Associates must design. The group saw as valid the 1960 plan concept of the "big" CBD as a linear system of sub-areas, each with a predominant function, and it was not difficult to specify therefrom the specific land use types to be permitted in the "small" CBD (the retail and entertainment sub-area). Existing objectionable uses, such as the growing honky-tonkism on lower Washington Street, and the discord of the garment district, were left as fair game for the designers. Of course, there were "sacred cows" -- buildings or uses not to be disturbed for any reason -- scattered throughout the CBD, including the obvious historical evidences
of the Boston culture and also the less obvious manifestations of the interplay of wealth, politics, friendships and enmities in the Boston economic community. Just to make sure that its message was clear, the CCBD set an overall constraint on clearance: no more than 20 percent of the existing square footage in the project area could be removed.

Work on the plan began on three fronts. Gruen transported part of his Los Angeles staff to Boston in order to commence work on Stage I of his contract. The BRA engaged Robert Gladstone, the noted economist, to begin work on the market analysis required in the renewal program. Finally, in September, Logue gave some substance to his ideal of a public-private partnership when Dick Beatty became the liaison between the BRA and CCBD. Although Beatty viewed his new role as that of educating the businessmen to the urban renewal process and of acting as an interpreter between the BRA and the CCBD when planning language and business language had to be reconciled, he actually developed broader functions. First, he never fully relinquished his role as a planner, and was now in a position to perform planning functions somewhat independent of the BRA authority structure. In the early stages he could, for example, directly assist and influence the CCBD in sorting out the criteria in the problems, and represent himself to BRA project director Hazen as a client, though he may have technically been performing the same functions he would have had he continued as Hazen's subordinate. Then, too, in relation to the urban designers' needs, Beatty opened an entirely new channel of communication within the design process, by supplementing his formal link to the process (through Hazen) with an informal and more direct connection with the planning and design staffs working under the project director. Thus, he became a direct conveyor of information to the designers from the CCBD. Beatty also kept open a channel between the Gruen firm and the BRA staff later in the process when these groups became estranged,
and formal communications broke down. Finally, Beatty demonstrated that at times the role can be a convenient device for promoting egalitarianism in public design, for, as we shall see, it was sometimes necessary for design possibilities to be developed and evaluated in ways much more sympathetic to the users of the CBD than the business interests may have been prepared to do. Fashioning and nurturing a sophisticated client was to become a function of this role. It was not known at the time it was created that this managerial role would broaden and take the shape it did. In fact, its legitimacy could have been questioned at the very outset due to its ambiguity and seeming overlap with the primary functions of other participants in the process, in particular those of the project director. In retrospect, however, several of the BRA personnel now regard Beatty as prominent in holding the program together during rocky times, based very much on the personal talents he brought with him in playing his role.

Defining the Problem

It took most of the spring and the summer of 1962 to weave a social environment for the Boston CBD planning process. In approximately the same length of time --from early fall to late January of the next year-- Victor Gruen Associates had labored sufficiently to produce a series of proposals for the complex area. The project team engaged in a review and interpretation of the standard information that the BRA collected as part of its application for survey and planning funds, undertook visual surveys of the area, and held conversations with people and groups active in the downtown area, including the Turnpike Authority, several private developers, and executives of many of the leading downtown corporations. Gruen's staff also carefully examined prior plans for the area. These, of course, are not uncommon activities in the incubation stage of a design process, and no
planner or urban designer thinks for a moment that all information acquired at the beginning will be relevant, or that all the relevant information will be captured by canvassing only the traditional sources. Normally we would expect to find little focus to the scanning operations so early in the process, and even the experienced designer is not likely to wander very far from an eclectic approach to data gathering. But Gruen's men perhaps had clearer conceptions of what they wanted to do than we would find in most cases. Judging from an analysis of the team's own account, it desired from the beginning much more information on traffic, access and servicing requirements, parking supply and demand, rapid transit plans, and building conditions than the level of design would seem to merit. It appears that the design strategy would key on circulation and accessibility, following the typical Gruen approach to a downtown design problem. In fact, it is clear from the interview questionnaires that Gruen wanted information at the outset on the likely consequences of his principles of city design, if they were applied to Boston.9

The impending shape of design possibilities was known to Beatty, Lee, and others of the BRA. Alternatives would be generated only within the framework of the Gruen formula. Somewhat disdainfully, the sum of initial design efforts came to be known in the BRA staff as the "Grand Plan." The staff anticipated a questionable utopian scheme savagely embossed on the existing city form, and it braced itself for inheriting a redevelopment strategy well beyond the capacity of the city to effectuate. In terms of the design

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9 The questionnaire asked local business men to describe the plans for their enterprises in a hypothetical CBD of superior circulation, separation of autos from pedestrians, virtually no servicing problems, and so forth.
product, the BRA may have been justifiably concerned, but if we regard "grand planning" as an element in the design process, Gruen's tactics make better sense. The effusive consultant viewed the first phase of design as exploratory, a time to probe for reaction to an abstract set of principles by translating them into concrete terms. Put another way, design possibilities, if they tend toward the extreme, might spur the client into sharpening his own goals simply as a defensive reaction, and to reveal more readily those constraints that otherwise might not surface until later in the process. It is sometimes easier, it seems, to set objectives for planning after studying their consequences rather than before. The technique has merits, but grand planning has to face the dangers of overreaction, of elevating to an artificially prominent position irrelevant evaluation criteria, that reflect concerns as conservative and untenable as the plan is radical and infeasible. We shall describe instances of this in the CBD design process as they appear.

The technique also can be of internal value, as an aid to urban designers in looking at the design problem. It can be viewed as an attempt to rely on design possibilities themselves as a device for extracting new and specific criteria out of the problem situation. Some students of the design process debate the efficacy of this strategy, especially as it has a tendency to become a crutch. It is interesting to us at this time, however, to investigate the Gruen design approach if only as a means for illuminating the nature of a physical design problem and how designers might interpret it, for the differences between Gruen's prototype and the first conceptual designs (the prototype adjusted to problem conditions) are assumed to reflect some of the parameters and constraints that the designers felt were significant in their initial appraisal of downtown Boston.

The Gruen staff discovered uncommon complications almost immediately. It is alleged that the west-coast designers were disoriented in an environment where a great deal of
planning work was going on simultaneously, not only within the BRA, but in other state and local agencies, and in the private sector as well that did not permit the Boston CBD to become an isolated physical problem. There was, in 1962, considerable overlap in planning activity in central Boston. Fort Worth was never like this. As a result, the designers were sensitive to planning and design strategies elsewhere in the regional core. Obviously, the Government Center plan couldn't be ignored in CBD planning now, for execution had begun. But Gruen's people were also quite willing to adopt as given conditions planning proposals still on the drawing boards in other offices, and still subject to change. Design possibilities in the South Cove, for example, were still under study at the BRA (in fact, after 1962 the center of that renewal area was fully redesigned three times). Thus, to a significant extent, in a dynamic situation where many uncertainties existed, Gruen's designers imposed a necessary degree of stability on the problem, not unlike a systems analyst who must close his system in order to examine it. One reason why far-reaching assumptions had to be made was that Gruen was not initially constrained by project boundaries, and he chose to work with as large an area as he could south of Government Center.

It is an essential feature of the Gruen norm to gird a central area with a road for handling the volume of by-pass traffic and to bring spurs as evenly spaced as possible from that road part way into the heart of the encirclement, to parking and service facilities. In Boston where Gruen elected to circle a large area it was impossible to apply this concept literally. Because the Common sits aside the core area pushing the latter to an eccentric position on the peninsula, Boston presented Gruen with an unevenly distributed activity surface and a serious constraint on achieving a regular geometry of spur roads. The alternatives then became either tightening the loop to omit the Common
so that the spurs would achieve the neat pattern, or keeping the large ring and developing another design possibility for the entrance tentacles. Gruen's design team elected the latter. It seems that the primary reason was that parts of a large loop appeared to exist already in the Central Artery and in Storrow Drive, the two highways sharing the responsibility for carry traffic around the edges of the downtown peninsula. Transforming these roads into arcs of the downtown loop effectively reduced the conceptual design problem to discovering a reasonable way of connecting the two somewhere south and west of the business district, across the breadth of the peninsula. While the concept was never really developed, the designers believed that, with appropriate changes, Arlington Street could perform that function.

Now that the loop contained the rise of Beacon Hill and the flat of the Common and could not ignore the sanctity of either, an important internal access road from Storrow Drive could not be built, and must be compensated for. There were similar problems coming in from the north. Gruen now deviated significantly from his ideal of balanced access by concentrating most of the parking-bound traffic on one major spur road, elevated more or less above Essex Street near the Garment Center, and a series of shorter, minor connections near the retail core wherever they would fit with the existing street pattern. Parking, in mammoth quantities, would straddle the major spur at the elevated level from the point where the road branched from the loop to its innermost penetration, Chauncy Street.

Though they themselves stood as awesome objectives to achieve, these circulation proposals also were means to even larger ends. Once ways were found to mutually adjust the ring road ideal and the Boston reality, Gruen would be able to get his mall. Once internal vehicular movement was under control (or, in this case, banished), the
designers increased considerably the number of other variables they could control effectively: the automobile, with unyielding mechanical requirements for turning, moving, and parking, was suppressed in favor of the more flexible pedestrian who, after all, was easier to manipulate and integrate into design schemes.

Gruen's primary target was Washington Street, the heart of the retail core. With a maximum area of the core free from traffic, a major mall could conceivably extend the length of Washington Street from the Government Center well into South Cove. It did, in this first concept. As Gruen was ideologically committed to the principle that pedestrian activity on malls generates development, he then by indirection was prescribing primary expansion of the retail core along Washington Street. Development in large superblocks was envisaged, aided by closing any other streets as necessary. Somehow, servicing both new and existing development, possibly underground, could be accomplished but was considered a detail to be worked out later.10

This generalized circulation concept was developed shortly after the design consultants went to work. Because of the open line of communication between the BRA and the Gruen staff during this period, local reaction had early opportunity to build. The scale of the loop was particularly bothersome to BRA designers, the costs were obviously frightening, and those members of the BRA experienced in the frustrations of dealing with the Massachusetts Department of Public Works and the Metropolitan District Commission saw little hope of gaining enthusiastic outside cooperation in massive highway alterations.

10 The overall design concept we have outlined here was never formally recorded, although the design consultants presented broad-brush diagrams of it prior to Christmas 1962. Consequently our description is not based on personal inspection of the plan but relies instead on the recollections of several interviewees present at that time.
The body of criticism led to minor adjustments and modifications but Gruen's group retained the essence of the concept through the remainder of the exploratory period that crested with the presentation of the Interim Report of January 20, 1963.

The Interim Report

Victor Gruen Associates issued the Interim Report about midway in Stage I and, thus, the document was a mixture of both utopian and realistic concepts, seemingly distinguishable by the degree to which the BRA criticism had been able to penetrate. The report was a document oversized for its purposes. It was not merely a presentation of ideas, but included a general discussion of Gruen's goals for the CBD, a summary of the Gruen design approach, and what amounted to a glossary of terms. Basically Gruen viewed the task of the plan as "raising the vitality" of the area. This could be measured in terms of economic productivity and, for Gruen, the simplest index of that would be an increase in the number of "core area activity participants," or money-bearing visitors and shoppers in downtown. To attract more customers, revitalization meant improved access and improved "environmental quality," the latter obviously contingent on the former. In the means-end chain he so carefully develops, the physical consequences of these twin objectives include increasing suitable uses and decreasing unsuitable ones, improvement of intra-core transportation, separation of "utilitarian" functions from "human" functions, and of course the prerequisite of

\[\text{There is a built-in problem here. Gruen suggested that the CCBD and the BRA make a statistical determination of what they would consider a desirable level of vitality. But the criteria for this were difficult to develop and if, as Gruen suggested, a healthier point in the past history of the CBD were used as a yardstick, then massive amounts of information would be needed to describe that moment in time and much of that information would no longer be available. See Gruen's Stage I Report to the Committee for the Central Business District, May, 1963, pp. 31-34.}\]
improved regional access to (but not through) the area.

The ambitions for downtown Boston were about the same as for Fort Worth or Cincinnati. They fit the problem no matter the case. But the similarities end abruptly. In Cincinnati, for example, the business district is relatively compact, with all activities set in a fine grain pattern in a regular grid of streets. It all rests on a flat square plain next to the Ohio River with hills on the remaining three sides. From Gruen’s viewpoint, the Cincinnati core is perfectly suited to the concept of a ring road with perimeter parking and short walking distances to all destinations within it. Boston, as we have observed, is a different sort of problem, and it is clear that the concept of a giant ring road was, by itself, an insufficient application of the Gruen thesis. This was a point that people like David Crane, the BRA’s planning and design director, were quick to make. The alternatives for Gruen then became fixed. The choice was not between a ring and no ring, for without removing traffic from downtown streets, Gruen could not achieve the pedestrian system that was his principal weapon in improving environmental quality. Instead, the choice at first was between a simple one ring scheme (becoming unacceptable to the BRA) and a more elaborated concept. The choice actually reduced itself to choosing between alternative views of how Boston’s core worked, and if the thesis of the old Planning Board Report was acceptable then, it might as well be the basis for the choice now. Gruen’s designers restructured their thinking and visualized the core to be a "cluster of urban nuclei" within the large loop, a series of sub-areas much along the lines of the principles advanced in the 1960 plan and other earlier studies. However, in establishing these sub-areas, the designers employed a

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The Interim Report (p. 46) notes another reason for special handling of the Boston case: "Boston has no gray area which without economic sacrifices would give the opportunity for construction of complex loop roads and garage facilities."
different criterion and, as a result, developed a different set. Several interviewees hypothesize that Gruen's concern was not with how the parts actually functioned, but with what were the largest sub-areas in which through traffic could be eliminated, working now from the assumption that the defining property of each urban nucleus would be a loop road (and mall). Actually this was a fairly rigid measure to employ, and Gruen's team, when they finished searching the possibilities, arrived at a set of sub-areas most of which were much smaller than in any previous plan, simply because Boston's tortuous street system admitted of little sympathy with the idea.

More or less within the CBD project area, then enclosing 159 acres, the design consultants identified seven separate centers of activity, which we have illustrated in Figure 5. The major characteristics for each were outlined in the Interim Report, with the promise that the Stage I report would completely specify the Gruen dream for the Central Business District. By any measuring stick that the business community could have employed, the proposals were astonishing in their scope. In the Washington Street Center, all traffic would be removed from all streets, malls would be created and embellished with landscaping and other usual trappings and would be enclosed and air-conditioned. Second floor balconies would be erected to connect the several major department stores. Underground shopping concourses would be improved, and a new system of separate service roads would be constructed. Tremont Terrace derived its name from a platform 18 to 20 feet above the public right of way running the length of the Common above a widened Tremont Street (necessary for a loop road) reserved for autos and service vehicles. Kiosks, bars, landscaping and the like would ornament the platform and escalators would provide connection to the Common on one flank and to the Washington Street Center on the other. Aside the platform, the Interim Report proposed high-rise residential structures with commercial
FIGURE 5. -- SUB-AREAS OF THE CENTRAL BUSINESS DISTRICT PROJECT AS CONCEIVED BY THE DESIGN CONSULTANT IN THE INTERIM REPORT
uses on the lower floors. **Old Boston Center**, the northernmost sub-area, emphasized the district's historic jewels. In this sub-area all streets would be closed but the malls would be open to the air. Every effort would be made to improve the settings of worthy edifices, such as **Old South Meeting House** and the **Old Corner Book Store**. **Old City Hall** on School Street would be preserved, possibly as a museum. Some compatible retail uses and restaurants were also programmed for the area.

The **New England Merchandise Center** would rise anew, from an area to the east of Washington Street completely cleared for the purpose. A raised platform (presumably over the entire area) would be constructed with service and public transportation underneath. Garages would front on both levels (a variation on the Essex Street spur that was rapidly being discredited by the BRA staff) and the platform surface would be landscaped. A Chicago-type merchandise mart was envisioned as the primary activity at platform level. For the **Garment Center** "total or at least a large amount of clearance" would be required to continue the platform from the Merchandise Center, but here the predominant activities would be new garment industry workshops, offices, and showrooms. **Park Square Center** (of indeterminate use) was viewed as the link between the core and the Public Garden. Boylston Street would be closed and Arlington Street, if it became part of the westerly distributor, could be depressed. The **Entertainment Center** would be upgraded throughout. Given its current deterioration in both structures and activities, this implied at least a moderate amount of clearance.

The justification for the recommendations of the Interim Report was uneven, and this seems to have been a reflection of the report's emphasis as much as the point in the process when the document was prepared. The transportation proposals were detailed and substantiated, in contrast to the almost casual way in which land use and the form of the district
were revealed to readers. In one respect the emphasis was not misplaced. One critical arena for decisions in the CBD would eventually turn out to be circulation, and many land use and spatial form decisions would be made subject to the constraints of the transportation system which, at times, seemed to be an independent variable in the whole design problem. On the other hand, Gruen's gestures on uses and forms were decidedly disconcerting to the CCBD members. Despite the consultant's claim that they were merely suggestions, the design proposals for the sub-areas appeared to some members of the Committee to be Gruen's final word on the matter. He failed to offer alternatives, issuing one "radical" proposal instead. Other businessmen, who were willing to accept Gruen's purpose, were confused just the same, for they were unable to see how such unreal suggestions could form a useful basis for further discussion. One banker claimed, for example, that the suggestions for Washington Street were "straw men" that were put up just to be knocked down. Gruen contended in response that real alternatives to wholesale change did not exist, that a wide range of alternative choices was absent from the planning process. The goals were self-evident features of the plan and the plan represented the only interpretation possible. If this were so, the CCBD was not clear just why. Richard Beatty feels now that it was inappropriate to hit the CCBD, new pupils in the school of planning, with goals and consequences so inextricably interwoven as were these. It was also difficult for the mercantile community to evaluate the report because many of them could not believe that their situation was really that bad, that the downtown dilemma could not be resolved more or less satisfactorily through improved circulation and increased parking without disturbing existing private lands.


14 Interview, December 14, 1967.
and uses so violently. Accordingly, reaction on the part of CCBD members defended the existing CBD and tended toward the provincial, regarding wide-reaching proposals in a narrow, personal vein. At times this had its extremes. One of the department stores, for example, is an enterprise that almost literally lives off the subway line. Its basement is where it makes its money. Yet it was concerned that the mall, despite what it might achieve for the entire CBD, would actually decrease its own business and destroy the "quality" image it thought the automobile had given it. The department store assumed (without any supporting data) that a significant number of its patrons were brought to the front door by taxi or private car, shopped, and then were retrieved by vehicle and whisked safely away from the downtown milieu, without so much as a peek into its competitors' windows. While claims such as these were irritating to Gruen and even to other members of the CCBD, at least they were honest, and were useful indicators of what the scope of future issues might be.

In general, however, it can be said that the Private Client underreacted to the Gruen plan. For a lack of objective certainty about its consequences, the businessmen used criteria that they, and they alone, understood. The CCBD looked to the BRA staff, whom it had gradually been coming to regard as trustworthy, for additional guidance. Recognizing perhaps too well what the Interim Report meant, the BRA can only be described as overreacting, but the process took time. The "bureaucratic planners," to use Gruen's allusive term, were not sufficiently prepared to back up some highly emotional responses with convincing evidence. Very little hard information was at hand beyond the traditional data used by "the Gruens," as the consultant's staff came to be called by these bureaucratic planners. Further, the BRA staff as such was not a stable, constant body of technicians. Participants in a design process can change over time. Gruen, in fact, was to change his entire staff at one point.
In the CBD project, the BRA served continually as the entry point for new faces of significance into the social environment, and each time this occurred it meant changes in the relationships among all key participants, quite beyond the bounds of the BRA's formal structure. And as this occurred, new reactions to Gruen compounded, so that the BRA was constantly strengthening its role, although at some cost in internal harmony in the agency for, while there was consensus among Logue's staff on the Gruen plan, each new participant brought with him different conceptions of what the alternatives should be. This will become very important later on.

Enter the BRA Staff

Tunney Lee had seniority among the various staff designers who were to join the project throughout. Lee was on hand the previous Spring when the businessmen were being organized and, until the aftermath of the Interim Report, his contribution to the project as a designer was not really important. He did make a singular effort to shape the politics of the project in its infancy, with an eye toward molding the CCBD into what he considered a truly representative body. The young architect was keenly conscious of the powerful position of the major department stores and the potential influence they could muster. If fully in command, Lee reasoned, the powerful elements in the CCBD could dictate the future of the host of smaller, more marginal, occasionally more ethnic enterprises that hovered around the four or five downtown blocks in which camped the elite and, who, in the original conception of a businessmen's planning committee for the core, were not included. Lee responded in a simple and direct way by initiating studies that led to extending the boundaries of the project to incorporate perimeter areas like the Garment District and Park Square, on the thesis that the small merchants in those areas would thereby
gain representation on the committee. This happened, of course, but time would expose the effort as vain partly because these minority elements that were the object of Lee's concern didn't, in general, seem to care very much. The power elite dominated anyway, and the pecking order of power seemed to be proportional to a committeeman's distance from the hundred percent corner pretty much throughout the four-year planning period. However, Lee also made another miscalculation which off-set his first one. He misunderstood his own role in the process at first for later, when his initial strategy failed, he found he could become a surrogate Client, a more centrally placed representative of the interests who failed to materialize in the formal scheme of things. Like Beatty, Lee was seeking a broadly-based client.

To Lee, the Interim Report must have been fearsome evidence that lesser interests were up for sacrifice to greater ones. Gruen's plans for the Garment District required massive clearance and temporary relocation which Lee and others at the BRA felt would drive many of the small merchants out of business. Lee felt that it was impossible for the consultant to continue toward a first stage report without recognizing some very pertinent constraints on feasibility. But these were value judgements about Gruen's plan, not facts, and Lee was in no position to argue his unsubstantiated judgements with the more prestigious Gruen. When the CCBD approached the BRA for an evaluation of the Interim Report, Lee prepared initially not to search out alternatives but to examine and report on the plan more systematically for its consequences, for the strength of the connections between the Gruen goals and the Gruen designs.

In large measure the land uses, activities and forms in the plan were consequences and causes of the circulation goals and transportation system derived to satisfy them. Gruen's forces began with these considerations in mind and Lee, in order to get to the point where
he could react to the more casual and devastating elements of the plan, had to begin reviewing it just the way Gruen had begun designing it. Unfortunately, the BRA in late Winter of 1962, was hindered by the lack of a strong transportation engineering staff to which Lee could turn. Logue was scouting for a permanent director of that section in addition to some competent staff engineers. Consequently, Lee had to serve as his own transportation specialist at first, a responsibility made more improbable by the lack of hard information about the existing systems that one interviewee described as so complex that "it takes a year to a year and a half to understand." In April, the burden lightened as Logue hired Fred Salvucci, an M.I.T.-trained engineer, as a member of the staff, and assigned him to the Central Business District Project to work closely with Lee in studying the Gruen proposals.

In future years, Salvucci was to gain a reputation at the BRA as an unorthodox and very competent transportation specialist. To the design staff, he would not fit the image of the engineer whose criteria centered narrowly on the details of Traffic Science. He would not conform to a role which conventionally assumed a predilection for the automobile. Salvucci was concerned with over-all systems and integrated modes of travel, and considered himself a planner rather than an engineer, though he certainly exhibited technical engineering expertise. In the CBD project, he would soon take a broad role in the design process and for a time help keep Transportation and Design on the same wavelength, operating in a unified manner.

In that same April, the BRA and Victor Gruen Associates entered into their contract. This provided the design consultants with additional special funds to complete the first stage of the process. Additionally it bound the BRA to retain other consultants to work with both the agency and Gruen staffs, and to conduct detailed surveys with the funds
released to the project by the Urban Revewal Administration less than a month before, when the application was approved in Washington.

The problem of formal stages to the development of the urban renewal plan was particularly troublesome to Logue. The initial focus on "exploratory planning," to be followed by "plan refinement and adjustment" was regarded in a cool fashion by the administrator. Logue was, after all, a man of action who was very much concerned with getting political support for the Plan. The local mentality demanded workable plans. He reminded Gruen after reading the Interim Report that its weakness derived from a lack of detailed implementation proposals. Logue had hoped that Gruen would have interpreted more broadly the terms of Stage I to get down to brass tacks early in the project. Gruen later agreed that perhaps a staged process should have been avoided, but as long as the arrangement had been sealed he would deliver a Stage I report, and would urge that Stage II be undertaken immediately. 15 Gruen was becoming nervous about the entire situation. Under the agreement, it was possible for his clients to cancel the rest of the deal at the end of Stage I. This option was reciprocal, however, and Gruen declared for the record that he would be compelled to exercise it if any constraints imposed as a condition of Stage II authorization "would be in contrast to the planning principles which in the opinion of VGA have to be adhered to in order to effectively bring revitalization of the Core area of Boston about...."16 BRA staffers, however, did not regard this as particularly threatening. They reasoned that Gruen

15 In letter from Gruen to Collidge, op. cit.

was a businessman as much as he was a designer. He wanted the prestige of the Boston contract and in order to retain it he would probably sacrifice a greater share of the initial design concept than his official statements might imply. Yet the staff came to realize that Logue needed Gruen just a little bit too, for the consultant had created a dialogue with the businessmen and was invaluable in educating them, as well as bringing status to the design process. He could still make downtown renewal respectable. Thus, while Logue was anxious for Lee, Salvucci, and the rest of the staff to explore the feasibility of the Gruen concept, there would have to be limits on how far it should be compromised. The BRA, now moving into a client role and Gruen, still the Designer, now entered into a peculiar interaction, where the traditional hierarchical relation would ebb slowly, replaced by a system of negotiation between these prime participants. This would characterize to a large extent the middle phases of the process, and the issues over which the actors would bargain were articulated in the Stage I Report.

The Stage One Report

The substantive issues were emerging before April and May, of course. Gruen's staff had been proceeding on the report and were in contact with the BRA staff, such as it was, through late winter and early spring. But Lee, Salvucci, and others had a late start and little time for any systematic attempts to modify the grand plan. Therefore, the initiative still belonged to Gruen that spring.

Without knowledge of the content of the Interim Report or of the reaction that was building within the BRA, the significance for the design process of Victor Gruen's Stage One Report is not easily apparent. The BRA and the CCBD were in the mood for some major modifications across the board; in the collective mind of the client, it seems that
nothing in the Interim Report was sacrosanct. If true, then the May document did not mirror that mood as much as it might have. It must be compared with the Interim Report not as a refinement of the earlier document but, as we said, as a means for clarifying the position that its authors were preparing to take on a host of impending issues. Where the second plan reiterated in some consistent way the proposals contained in its predecessor, it did so as a general rule in spite of client criticism, and thus made clear which planning principles Gruen would prefer to retain. These commissions, we suggest, could be viewed as the elements that would be brought to the bargaining table the next time around. On the other hand, the fact that there were differences between the two plans showed that Gruen was not entirely inflexible, that he was willing to sacrifice a range of opportunities in order to achieve some compromise with his clients. The “bargain” could have been struck at this time, were it not for continued dissatisfaction on the part of BRA staffers. But “negotiations” were far from over. Specifically, let us examine the design issues that were taking shape at the end of Stage One, in May of 1963.

The Stage One Report, first of all, reaffirmed Gruen’s intention to separate vehicular and pedestrian movement horizontally and completely. In response to criticism two new alternatives were illustrated and examined in depth and then rejected by Gruen in favor of the consultant’s original preference. Likewise, the series of nuclei and the concept of loop roads remained identical to the so-called preliminary proposals. Gruen also restated his intentions in Washington Street Center, Tremont Terrace, Old Boston Center, and the Entertainment District. The use of Park Square was now determined to be residential along Boylston Street, with specialty retailing and offices clustered around the Statler Hilton Hotel. Recommendations for improving rapid transit facilities remained and, in fact, gained in emphasis.
The concept of a New England Merchandise Center was retained, though the plan was now unclear on the question of total clearance. Also, it was not evident if or how the platform idea could be developed.

The future of Garment Center exhibited a real reversal of policy by the Gruen staff. "Total or at least a large amount of clearance" became "extensive rehabilitation," a more palatable treatment. But this area could be programmed as one of the last stages of the redevelopment program and with no immediate concerns about the feasibility, Gruen hinted at total clearance in the long run.

One other element was slipping out of the plan. It appears that the large loop, on which much attention was showered in the Interim Report, was not going to materialize. Its weakness, of course, was the Arlington Street connection, an expensive undertaking and perhaps a little too close to the Public Garden for comfort. By May it had disappeared, as had the closing of Boylston Street, and no replacement was offered. Thus, Gruen had returned to early concepts of feeder streets from the Artery and the Turnpike primarily.

The Stage One Report barely began facing the practical difficulties of threading a loop system throughout the district, based on the several nuclei proposed. Like the Interim Report, two versions of the report were issued, the full document and a condensed brochure for public consumption. It is in the latter version that a new recommendation appears, while the former (on page 54) maintains the original idea of complete clearance.

The Report noted: "To find exact routes for the system of interconnected loop roads will be one of the most complex tasks to be undertaken in Stage II of this study. The difficulties arise from the narrowness of the existing streets and from the fact that every attempt to widen such streets may make necessary the demolition of major buildings at one point or another. We are fully aware that the establishment of routes for these roads in such manner that only a minimum of demolition is necessitated will be a difficult and time consuming process...." Clearance for circulation improvements, however, would become less of a concern as the process moved on.
it was only suggestive of the concept in sub-areas like the Merchandise Center, Park Square and the Garment Center. Like the Interim Report it was firmly committed to a loop around the core of the retail shopping area. The consultants studied various possibilities and recommended a one-way (clockwise) pattern around Washington Street, using parts of Essex and Tremont Streets for two of the sides, then making an obvious connection between Bromfield and Franklin Streets to form the top leg of the loop, and closing the circle by commandeering Otis Street between Franklin and Essex. This loop would more or less circumscribe two sub-areas, Tremont Terrace and Washington Street Center. Upper Washington Street --Old Boston Center-- also could be spared from traffic by employing a loop system that included upper Tremont, Court, Devonshire (the extension of Otis) and with Bromfield-Franklin now serving double duty. To gain pedestrian continuity from one sub-area to the other, this plan proposed that Bromfield-Franklin be elevated to pass over the Washington Street Mall.

The emphasis in Stage One was on specifying the nature of three sub-areas in the interior of these two interconnected loops and, within that scope, the concentration was heavily on Washington Street Center. Of 23 pages of text devoted to land use for the entire project, 17 were given over to this retail sub-area. The proposals differed from the preliminary ones only in elaboration. Enclosed air conditioned pedestrian areas, second level galleries, fountains and pools, kiosks, internal "Carveyor" transit sub-systems, sign and architectural control, and the rest of the slate of environmental improvements, all were still formidable elements in the Washington Street physical and visual revitalization. The total transformation of the character of the core area was as excitingly portrayed as four months earlier. Specific proposals were made for Boston's major department stores, right down to the level of site and landscape design. Suggestions
for locating retail "magnets" at strategic locations along the major axis of malls were clearly put forth. For all intents, the plan for the retail sub-area was as finished and polished as was necessary, even down to the special system of truck servicing "courts" and special feeder streets and alleys spinning off the loop road. As other sub-areas received negligible attention in the same document, the Stage One Report took on a very uneven appearance, and adopted a very clear focus.

Priority treatment of the heart of the commercial area is understandable, for this is Gruen's forte. It is what he believes he does best. Preoccupation with the intense retail sub-area shaped design strategy in that a goal only partly implicit in the redesign of the other sub-areas was that their first obligation was to be used as means for attaining the ends of Washington Street Center. For example, aside from the four major parking facilities proposed (or proposed to be expanded), the criterion for the location of any additional facilities was "immediate proximity to the enterprises of Washington Street Center"19 which effectively meant in surrounding contiguous nuclei. Thus, a two-stage incremental, rather than comprehensive, approach to CBD planning was offered: once the Washington Street sub-area design was optimized, the other sections of downtown would be designed, subject then to the constraints of prior design decisions made in these sections on behalf of the prime sub-area. In staking out of the arena for bargaining, not only was Gruen interested in effective control proportional to the distance from the hundred-percent corner, but he was also anxious to exclude from further manipulation by other participants certain selected areas on the outskirts of, but essential to the success of, the chosen land of retail strength.

Seven Critical Months

The Stage I report of May 1963, with its focus on Washington Street, contained relatively few statements of the public policies and intentions that ultimately would emerge from the CBD design process. However, the draft Urban Renewal Plan that Victor Gruen Associates submitted in the middle of January, 1964, at first glance resembles in many of its characteristics the final product, to the extent that one participant would later summarize the similarity by saying that the draft plan contained final decisions on about "75 per cent" of the project area.20 If true, then in the space of seven and a half months in 1963 some radical shifts in thinking apparently occurred that should mark this period as one of the most significant in our chronology. We shall examine it here in an attempt to trace the changes, to evaluate their significance, and to comprehend the circumstances surrounding them.

Generally speaking, it cannot be said that the period immediately after the presentation of State I was marked by any change in the social environment for making design decisions. If Victor Gruen Associates had severed its relationship with the BRA and the CCBD one might be able to claim that the draft Urban Renewal Plan was the product of an entirely new operation. But Gruen and his staff were very actively involved in decision-making in that interval. Had Logue chosen to suddenly invest the operation with a high degree of his own brand of personal authority, including the making of decisions unilaterally out of political expediency, one might trace the alterations to this kind of activity. But the BRA Administrator, it appears, continued

20 Interview with Richard Beatty, April 29, 1968. One clue to the changing shape of the plan was the appearance of new names for the sub-areas, names that would carry over into the final design product.
to participate in a relatively minor capacity, with no change in his relationship to Hazen and the rest of his staff, or to Gruen, or to the CCBD. The latter group, for that matter, did not experience any internal change for shifts in formal external relationships during those months either. The BRA staff had already begun moving into more central roles in the process, so it was not responsible for suddenly changing the way the environment was structured. Additionally, it seems fair to state that not only were there no significant or abrupt changes in formal relationships but there were likewise no changes in the participants occupying roles in the process: the draft plan of January 1964 was produced by essentially the same individuals behaving in the same way as were involved in the Stage I design process.

We can suggest instead several other factors which would seem to account for shifts in attitudes on the Central Business District problem. First, there was clearly an information "surge" during the second half of 196f. Coincidental with Gruen's Stage I plan, Robert Gladstone presented the BRA with his preliminary market study for use in connection with both the Downtown GNRP and the Central Business District Project. Of course, some of this information had been transmitted periodically by Gladstone during the report's preparation, but now the full document was available to all parties. A special transportation study executed under the auspices of Boston College also was completed in 1963. Though it was not done for the BRA it nevertheless was an analysis of extreme interest to the agency's staffers, especially for a small sample origin and destination survey in connection with projected transportation needs. Toward autumn the BRA began in earnest the large-scale, comprehensive, and often tedious land use and building surveys

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characteristic of renewal planning. While much of this information would not appear in
time to influence the draft plan, the planners garnered enough by the beginning of February
1964 to permit them to act more authoritatively in reviewing the Gruen proposals.

The increasing inventory of statistical data was always being supplemented by simple
field observations, some of which illustrate that relevant data do not always show up in
the statistics. For example, traditional means overlooked the existence of a large Roman
Catholic retail center --candle makers, tailors of religious garments, church music
suppliers, interior furnishers, and so on -- that clustered in a three block area back of
the main retail section of the CBD, in business to serve the second largest archdiocese
in the country.

A different kind of information was also being received at this time, and was concerned
with the host of private, individual decisions that are made outside of the design process
but directly affecting it. The opportunity to buy South Station was emerging as a real
one now, and some major decisions were made by local retailers concerning their own
plans for the immediate future. Thus, the plan for the Central Business District would
have changed in any event, if only because of certain decisions made outside the process
that could not have been anticipated by Gruen during Stage I.

Not all the information was new, in the sense that it corrected or replaced data that
had led to design criteria inherent in Gruen's earlier proposals. Therefore, it was not
the information surge alone that led the design consultant to new ideas about the
Central Business District. Gruen, as we have observed, drew many of his criteria from
universal "data," information on cities in general. Thus, even where the information
was corrective or expository, it sometimes dealt with details rather than grand planning
concepts and was not important to have on hand at that time. The information seems to
have been more useful to other participants in the process, but here again, not as a means for identifying new criteria at that time. Formal and systematic land use and building condition surveys, for example, revealed to BRA staff very little about the CBD that informal "windshield" surveys did not. Indeed, the emphasis was on using hard, quantitative data as evidence to substantiate criteria already achieved through different means by other participants, even before Stage I began, but which had not necessarily been reflected in the Stage I report. The seven month period preceding the draft urban renewal plan was spent impressing these additional criteria and design considerations on Gruen. It was a time for expanding the scope of the design process to include other criteria and make the recommendations more creditable, and this is what the draft plan, as a product of Gruen's activities, reflects.

It was also an appropriate time for Gruen's clients to evaluate the consequences of those ideas that Stage I did reflect, mostly the concomitant circulation network built around the mall concept. Thus, while the design consultants would devote the majority of their time in late 1963 to exploring previously unexamined aspects of the problem, the BRA staff would be re-exploring previously-examined items in the design. This is not reflected in the draft plan for reasons we shall discuss below, but did much to shape reaction to it.

The BRA design staff quickly got into reality in reaction to the Stage I report. Given Gruen's objectives, they believed that the ring road would have to be overly large in order to work. They developed a model to test the plan, and concluded as follows:

Using the model to make assignments for the loop road suggested by VGA..., we found that the loop road would be unable to maintain the present level of service to and through the area. Besides this, in assigning flows to the system, the loop road was avoided wherever possible in order to minimize the loads on it. While this procedure enables the loop road to be almost
sufficient, it really understates its inadequacy. If congestion forces people to avoid the loop road and to use only the unavoidable segments near their destinations, the one advantage of a loop road, i.e. its clarity, is lost. Also the traffic avoiding the loop road was assigned to other roads outside the system, which (we assume) are already fully used. The proposed loop encloses an area of approximately 1600 feet by 1200 feet. Taxi and drop off service to this area would necessarily be impaired unless the area were penetrated for these purposes. 22

Other consequences of the consultants' proposals were critically evaluated in this manner, in terms of the goals they purported to satisfy. In the end, Logue's staff concluded --not without bias-- that given Gruen's purposes, a better plan was likely, especially as related to the district's movement system. The staff actually prepared alternative plans in this direction, but even they could not be demonstrated as being much more creditable than the Gruen original.

While the design process began to expand its technical orientation with more active participation by the BRA staff in developing design possibilities, the Committee for the Central Business District had to face the question of whether the overall approach to doing the plan was indeed the right one. The individual reactions of members of the Committee to the plan, one member advises us, were similar to one another, and the group felt insecure about retaining their consultant for the second stage. There were, of course, objections to some of the proposals, but these could be smoothed out with BRA assistance. There was a feeling that perhaps Gruen was spread too thinly among many jobs and might not be able to devote staff time in sufficient quantity to develop a workable plan. This, likewise, could be compensated for with BRA staff cooperation. Obviously, much would depend on the BRA, and the merchants' insecurity arose in large measure out

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22 BRA, Central Business District Project, Planning Report #2: Circulation, June, 1963, mimeo, p. II.
of how agreeable the city agency would be in achieving a close, harmonious working relationship with Gruen, given the patently different views on downtown that were beginning to emerge in that organization. Logue was reassuring when asked to comment. He advised the client group that he would commit his agency to work with the consultants, should the CCBD retain them. Gruen similarly assented to BRA participation, and assured all parties that his proposals were not so inflexible as the original impression seemed. In this atmosphere, the Committee proceeded to contract with Victor Gruen Associates for the remainder of the services to be rendered.

The summer of 1963 was marked by a great deal of communication among participants. Initially, we have noted, so much emphasis had been placed on the Washington Street Mall that other parts of the project area were orphaned by comparison. Victor Gruen’s team, in getting to know more about Boston, broadened its outlook as it began working toward a district-wide draft plan, encouraged quite a bit by all with whom they came into contact. The BRA staff, especially Lee and Salvucci, provided the impetus for developing as soon as possible a more reasonable set of policies for those sub-areas, like the Garment District, that were at the geographic and economic periphery of the CBD. At the CCBD Beatty was impressing the businessmen with those problems out of sight of the major department stores, such as the development along Tremont Street. Robert Gladstone, for his part, not only reacted unfavorably to the New England Merchandise Mart, but suggested alternative possibilities for that sub-area. At about this time, it was becoming fairly clear to many participants that Summer Street was a likely retail area, especially if Gladstone’s

23 Minutes of the CCBD Executive Committee, June 10, 1963.

view's on a Transportation Center at South Station would bear fruit, for Summer Street in such a plan would once again maintain a high relative volume of traffic to support retail uses.

In the main, however, the "broadened" scope of design largely ignored the knotty circulation problems, in favor of temporarily emphasizing land use decisions. But not even the latter decisions could all gain a consensus, as the participants now began to focus on appropriate goals for retail development.

In his preliminary economic report, Gladstone concluded that the Boston CBD could absorb one million square feet of new retail floor space overall. The impact of the projection was not clear until the design consultants attempted to translate this into a physical form. Gladstone's study somewhat substantiated Gruen's own judgement of retailing needs in the area, for it provided a solid basis on which to expand retailing north and south along Washington Street in concert with the proposed long Mall. The report also strengthened the case for developing a much larger Summer Street retail area than most participants conceived. However, even maximizing new retail land use in those two strips left the plan far short of providing all the floor space projected in the market analysis. Indeed, the plan would fail by almost a half million square feet of meeting the anticipated demand. To provide this meant either scattered site development under a strategy of spot clearance, or redeveloping --through large-scale clearance-- a sub-area of the CBD to the extent necessary to meet the economic projection. Gruen's team elected the latter approach and suggested to the CCBD the possibility of a "Fashion Square," a new high quality shopping area between Tremont and Washington Streets, centering on Avery Street. To some extent this was a revival of the Tremont Terrace concept, which the businessmen and the city had rejected due to the problems,
obviously the political ones, that the platform next to the Common would create. The consultants viewed the Avery Street development as a new retail-office-residential project (sans platform) with good surface and submerged pedestrian connections to the rest of the project area and with the rapid transit system that almost, but not quite, served the area directly.

The idea was broached to the CCBD in late September, along with a general reaffirmation of the critical aspects of the circulation thesis. Immediate reaction to Fashion Square was decidedly negative on two points: a high quality shopping center already existed in Boston's Back Bay that was stable and not evidencing noticeable decline, but at the same time gave no indication of requiring expansion space in any significant amount; and the costs of acquiring and clearing the area would be enormous. BRA staff then reviewed the new set of proposals and presented its critique to the Committee's leaders, who concluded in part that

It was obvious that VGA was stressing the importance of a traffic circulation plan and some of his earlier concepts, which supposedly had been abandoned. ...the retail area should not be elongated on Washington Street south and that more consideration be given to developing a satisfactory retail area on Summer Street toward Church Green; that a restudy be made regarding extension of the retail area toward the so-called "Old Boston" area; that any consideration of a retail development in the Avery-Washington-Essex Streets area is just wishful thinking....that VGA restudy its planning in light of our earlier concepts dealing with spot clearance versus mass clearance....

The critique was obviously a setback to Gruen's design efforts, placing him in the position of having to reconcile conflicting criteria on retail development, for the CCBD and the BRA were requesting alternative design possibilities that ran counter to the Gladstone report and the logic of the Gruen concept for downtown. The consultant

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and his designers attempted to develop a satisfactory alternative, but recognized that the battle may have to be waged at a different level among different participants, namely the advocates of the opposing sets of criteria. Acting in essentially the only was possible for him, Gruen maintained an alignment with the market study, and told the CCBD that, subject to a reevaluation by Gladstone, future prospects for retailing will require the use of lower Summer Street, the Old Boston area, and Fashion Square, despite contrary intuitions of CCBD members.26

If the logical consequences of the Specialist's projections were unacceptable to the clients, then the projections themselves demanded further scrutiny. Gladstone was called back to Boston to defend his stance, a process begun in late November, and one which apparently could not end quickly in any resolution. At the same time that this issue was current, the logical consequence of Gruen's mall --the loop road system-- was as far from being acceptable to the clients as six months earlier, in spite of some rather imaginative possibilities that had eminated from Gruen's office. And while this stage of the process exhibited what David Crane called "splendid cooperation" on the part of the design consultants, Gruen steadfastly maintained that the benefits of the Mall would far exceed the costs --financial and otherwise-- of forcing a north-south by-pass system to work, and therefore refused again to compromise his plan. He was unconvinced by BRA alternatives.

The Draft Urban Renewal Plan

In a sense the draft Urban Renewal plan submitted by Gruen in the middle of January,

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1964, while it may have indicated substantial progress toward a final product and might be regarded as a formal point of interface in the process, deserves barely more than a footnote in describing the process in operation for it implies a moment of consensus prior to forging ahead with refining the design, which is untrue. The decisions were broad but unilateral. The plan's appearance at that time seems to us to reflect more the inertia of the process, an explicit statement born of irreversible procedure, of deadlines and pressures, rather than of satisfying the ends that CBD designing had to serve. The plan incorporates information without giving participants the opportunity to assess and digest it. It resolves neither of the two key issues discussed above: in the case of retail development, the plan was too far along to reflect the concerns of the CCBD and BRA; and in the case of the circulation system it reflects a commitment to an alternative resulting from expediency moreso than conscience. Even Gruen, we are told, wasn't as happy with the loop as he might have been if more time were available to study possibilities.

It came as no surprise to the receivers of the plan that the Avery Street retail development appeared in it (although its haute couture character was eliminated), as did a by-pass system around a maximum-length mall. Gruen's team worked strictly in accordance with the economic projection and proposed 450,000 square feet of retail and 200,000 square feet of office space in the Avery Street enclave, opting for the demolition of almost all structures in a five acre area. For circulation around Washington Street, the plan retained Tremont Street as the primary southbound carrier. Most of the northbound flow was assigned to a set of connections beginning with Harrison Avenue at the southern boundary of the project. Where Harrison intersected Beach Street, a new road was proposed to cut through several blocks to make a direct connection between Harrison and Otis, and thence onto Devonshire up to the Court Street termination.
FIGURE 6. -- FEATURES OF THE CBD DRAFT URBAN RENEWAL PLAN, JANUARY, 1964
at Government Center. A supplementary road connection was proposed a block to the east: a new artery connecting Essex Street to Church Green and then to Federal Street, with an additional link to smooth out the connection between Federal and Congress at Milk Street, where presently there is a jog of some 100 feet in the alignment.

The principal Mall would run between Essex Street and Government Center, on Washington Street. The two major cross-streets for vehicular traffic, Bedford-West and Franklin-Bromfield, were again proposed to pass over the Mall to separate that traffic from the legions of foot shoppers on the promenade.

As mentioned earlier, other features of the plan expressed movement toward policies and actions on a district-wide basis. Gruen had studied the lower Summer Street strip, and recommended the strong pedestrian link from South Station that is so forceful in the final product. This included clearance and redevelopment on the south side of the street. A second large redevelopment site is shown for the large block at the southwestern tip of the Common bounded by Tremont, Stuart, Washington and Essex Streets. This is the so-called "Hinge Block," for it marks the bend in Boston's larger downtown where the north-south orientation of downtown twists to meet the alignment of the large Back Bay part of the core. The plan also reflected many more small decisions that information from surveys and independent decisions had now made possible. A number of scattered sites could be safely marked for demolition, leading especially to early resolution of locations for additional parking structures near by-pass roads. It was in such decisions, it seems that this plan marked progress over the Stage I presentation.

The plan improved on the uneveness of Stage I, but still lacked much study of Park Square, first of all. Another problem was emerging as difficult to resolve and, thus, little gain was made in this plan. This was the whole problem of servicing, especially
as it had to be handled in the case of the maze of smaller, densely-packed activities
between Tremont and Washington north of the Avery Street development area, commonly
known as the "Ladder Blocks." The third sub-area which lagged in its development was
South Station itself but, of course, it was only recent knowledge that this area might be
acquired.

The Redevelopment Authority staff was very close to the development of this draft plan.
Its influence is seen in its lesser features, however, if we can assume that broad circulation
and land use decisions are its more critical components. Victor Gruen Associates, who
had laid its cards on the table in the Stage I report, had budged little from its initial
bargaining position, and probably strengthened its case simply because of both the
Gladstone report and the failure of the BRA and the CCBD to find a reasonable alternative
position under agreed criteria. The BRA staff response to Stage I was generally optimistic
about the possibilities of mutual adjustment among participants in arriving at a plan.
The intervening period had proved a disappointment to many leading staff members,
not only with Gruen but with themselves as well. Their influence on design had failed
so far to match their intimate contact with the design process.

A Very Loud Response

The staff response to the draft Urban Renewal Plan reflected a much harder line. 27
In reexamining those aspects on which the consultant had settled in his recommendations

27
Boston Redevelopment Authority, BRA STaff Analysis of Draft Gruen Plan of
1/16/64, mimeo, 18 pp. + maps, January 30, 1964. While this is technically
referred to as a staff document, one interviewee instrumental in its production
points out that it also represented inputs from individual CCBD members.
it regarded Gruen's position as totally unacceptable, and proceeded to isolate the issues, and outline them in detail. It was now the clients' turn to place some cards on the table.

Accepting the concept of the Mall, the staff analysis concluded that it was economically and physically infeasible to close off upper Washington Street (between Franklin-Bromfield- and Court Street) for the maximum achievement of the concept. It believed that the resultant widening of adjacent Tremont Street would be too difficult --given existing sidewalk widths-- and socially unacceptable --given the encroachment on the Park Street Church and the Granary Burial Ground. On the other side of the project the circulation changes on Devonshire and Congress Streets would require expensive acquisition (between four and five million dollars) and the taking of an existing parking garage.

The BRA made it explicit in its analysis of the draft plan that, as a matter of local public policy on the CBD, it would now no longer tolerate acquisition of private property for the sole purpose of improving circulation. This was an extremely radical constraint to impose on the design consultant, one that could have easily emerged from a fit of pique as from any rational consideration of the design problem. It had become evident to many participants intimately involved in the development of design possibilities in the first eighteen months of the process that the key to any plan would have to be circulation, and that achieving a successful system for both vehicles and people would perforce include some clearance expressly for that purpose. Enough study had been done to indicate that the designers needed some measure of control over private property, but it was becoming apparent that local political standards of acceptable public intervention

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28 Ibid., p. 6.
were about to be violated. The imposition of this constraint effectively reversed priorities in design, by giving land use sway over circulation. It would become a hard position for the consultants to live with. It would also backfire on the BRA staff, as we shall narrate. Eventually the new rule dropped from sight almost altogether but, in the meantime, its appearance presaged a difficult period for the various designers who would have to work within its limits.

As one might anticipate, the Avery Street development was also a sore point for the BRA, though the issue was equally with Specialist Gladstone as with Designer Gruen. The BRA staff challenged Gladstone simply on the basis that he was stretching the market for new space too far. It criticized Gruen on the grounds that, even if Gladstone could justify his estimates, Avery Street was the wrong location for new retail development anyway. In the BRA's opinion that area was not in wretched enough condition to warrant demolition and, moreover, the loft space in most of those buildings was a valuable relocation resource that should not vanish. For Logue's staff such new development could alternatively be located on lower Washington Street, between Kneeland and Essex, in a deteriorating block. This would at least be cheaper than an Avery Street development, which the BRA estimated at between seven and ten million dollars, just for property acquisition.

If upper Washington Street were kept open and the Avery Street concept were abandoned, the BRA reasoned further that the expensive overpass connections at Franklin-Bromfield and at Bedford-West were superfluous and should likewise be stricken from the urban renewal plan. As both streets are one-way, a simple signalization system could handle a pedestrian-auto confrontation at grade.

These rejoinders were prefaced by an ominous remark: "At this stage in project planning there are, of course, many unresolved details and refinements but they cannot
be usefully considered until basic issues have been settled.\textsuperscript{29} This was not exactly what transpired, however. In its analysis the BRA staff and the CCBD conceded that there were parts of the draft plan to their liking. These Clients also felt that the detailed development of plans for those parts could be developed independent of the settlement of the so-called basic issues. And they also needed assurance that, in fact, they were moving toward something certain and concrete.

The basis for the decision was that these separate and partial plans could be implemented without regard to one another, or to the rest of the project area.\textsuperscript{30} As long as clients and consultants agreed on (1) the amount and pattern of clearance, and (2) a general schedule of reuses, then these sub-projects could proceed at their own pace. Thus, the development of the design after January, 1964, would be no less uneven than in prior times: the Hinge Block, for example, was just about in the stage of site planning while neighboring Park Square was still relatively ignored; lower Summer Street could be worked out in detail while the Washington Street Mall floundered in continuing conflict. Meanwhile, there was no effective circulation plan.

Part of the BRA's discontent with the draft plan arose from that agency's first explicit and systematic consideration of the costs of implementation. Indeed, the costs of acquisition would by the end of the design process become an overriding criterion for design and evaluation. This need not be a universally paramount design consideration: one knowledgeable BRA staff member points to the BRA's South End project as an example of a different "counting constraint", or operational measure of the success of a plan in

\begin{footnotesize}
\begin{enumerate}
\item[29] Ibid., p. 1.
\item[30] Ibid., p. 10.
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meeting its goals, where effective design was thought of more in terms of housing than dollar bills.

The draft plan, it was estimated, would tally up to approximately 52 million dollars for property acquisition, including the Avery Street proposal. Excluding air conditioning the mall system would cost slightly over one million dollars to develop. The overpasses, if retained, would cost close to two million dollars. Altogether, the net project cost would be about 75 million dollars of which the City, responsible for one-sixth the cost under the Massachusetts renewal formula, would be required to pay 12.5 million, or provide the equivalent in project improvements. This obligation could be fulfilled through publicly-provided parking structures for 5,000 cars, according to the staff analysis. Nevertheless, Logue, as the occupant of the role of the Paying Client, was becoming gravely concerned with the high overall cost, for fear the Federal Government might balk at absorbing its share. To some extent, then, the constraint on acquisition for circulation purposes—that is, acquisition where there was absolutely no hope of recouping even part of the cost through resale to private land developers—was probably predicated on this factor as much as on concerns about disrupting existing uses and areas needlessly. Which of the two concerns was more important probably depended on the individual staff members who participated in making that decision.

To summarize, the viewpoint of the BRA and of most of the CCBD members was lucid, unequivocal, almost explicitly unyielding, and probably as unreasonable to the design consultants as their views—expressed through design possibilities—were to the clients. The design process now moved into a clearly different phase, characterized by "counter-planning" and a general and quite interesting shift in the interrelationships among participants in order to get the job done. It continued to be fraught with conflicting
interests to be reconciled, but the shifts in participant roles caused much of the action to shift to the BRA. We shall describe this activity now, as essentially the next major phase in designing the CBD in Boston.

Counterplanning

Counterplanning requires some explanation, for it tends to be used amorphously. Basically there are four characteristics to counterplanning, of which the first three are: there must be a perception, however intuitive, that the original plan is inadequate; this perception, and the subsequent preparation of a new plan must be by someone other than the author of the original plan; and there is usually an agreement on, and similarity of, the information used in both plans.

As our interviewees use the word, no distinction is made between a counterplan and an alternative plan, yet we find that analytically such a distinction is useful. Both plan types may meet the preconditions noted. Both can also be characterized as plans offering design possibilities different from an original plan. We prefer, however, to reserve "alternative plan" for new design possibilities based, generally speaking, on the same criteria as the original plan, and to use "counter plan" to refer to design possibilities based more or less on criteria different from the ones that produced the original proposals. This is the fourth and most distinguishing characteristic. The distinction is useful in these particular case studies because so much of the activities of the BRA staff is customarily defined as "counterplanning" that it has been difficult to sort out these activities in light of the elements of urban design, as well as to capture the nuances of the strategies by which the designing function is executed in the presence of an already completed plan.

From the viewpoint of the structure in the social environment, counterplanning requires
a new occupant for the Designer role.

BRA Administrator Logue made the decision to permit Lee, Salvucci, and the rest of his staff to prepare a counterplan. Logue was no more convinced by the enormous size of the pedestrian area and other features of the Gruen plan than were his advisors. Except for abandoning the Avery Street retail proposal in favor of greater changes in the Ladder Blocks to the north, Gruen objected strongly to the list of modifications that the BRA thrust upon him in late January of 1964, and had again threatened to withdraw.31 The CCBD now had moved considerably in the direction of the BRA camp, partially because the agency, in its official stand against the plan, was echoing the same apprehensiveness about the Mall that certain large retailers had harbored almost from the beginning of the design process eighteen months before. Logue’s move was about the only one he could have made under the circumstances. Gruen’s assent to the move was likewise the only choice he had, unless the consultant seriously wanted to sever his connection with the project at that time, something BRA staffers never believed. Thus, the BRA staff commenced putting together its plan in February, working under a two-month mandate from Logue.

Logue did not entrust counterplanning to any unified, harmonious group, however, for within the BRA staff there had developed some deep, almost passionate divisions over the CBD that now would surface. Specifically, the major issue was still circulation, as the transportation planners and the urban designers stood toe-to-toe on assessing its relevance to downtown Boston. Salvucci, who by this time was more sympathetic to design criteria than to the exigencies of traffic planning, summed up those criteria in saying, "Design was reacting to having downtown turned into a traffic interchange."32

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32 Interview with Mr. Salvucci, March 15, 1968.
True, the designers recognized that Washington Street in its present state was an inadequate artery, but because the mall concept carried with it consequences unacceptable to the urban designers, and because they believed that Washington-Tremont was still the most viable pair of streets in the north-south network, they argued that it should be made to function properly by reducing vehicular traffic instead. Data, in the form of a mode-of-travel survey undertaken by Barton-Aschmann Associates, the BRA’s transportation consultants on the project, convinced the designers that this was a possibility. The survey showed that public transit was far and away the prevailing mode of travel to the CBD: 70 percent of all entrants to the area came by transit, 15 percent came by automobile, and because the rest of downtown and several of Boston’s larger and older neighborhoods nestle against the CBD, about 15 percent entered the area on foot. The designers interpreted this as meaning that public transit was overwhelmingly popular with downtown-destined people and, if the service were improved, even more people—from among those coming by car—would use it. Under such favorable circumstances (coupled with a minimum of rerouting of north-bound traffic), Washington Street could be made to accommodate a projected traffic volume with no physical changes, because the volume would be decreasing.

Over in Transportation the data were being interpreted in a startlingly different way. Even accounting for both qualitative and quantitative differences in mass transit service, the percentages were unusual for American metropolitan areas with a rate of automobile comparable to Boston (a very high rate, incidentally). Barton-Aschmann’s specialists

33 Where all these people were going once they entered the area was the subject of another study, which showed that 20 percent, regardless of how they got there, were simply lost, and had no business being in the CBD at all. ((Interview with Carol Murdoch of the BRA staff, April 8, 1968).
believed that this low percentage of automobile travel actually reflected an unhealthy situation, that people were being forced out of desperation to use public transportation, simply because of the poor parking facilities and the narrow circulation corridors that twisted through and around the old core of Boston. To the engineers the data lent credence to the argument for more capacity on CBD thoroughfares. The key strategy, then, was not improving mass transit in any considerable fashion, but improving the conditions for driving. The engineering analysis of the same data, therefore, suggested the need for wider streets. If this were unfeasible on certain streets, then they might as well be closed. Washington Street was an especially good case in point. The sidewalks were already too narrow to handle the crush of pedestrians, so that a street widening was impossible. The transportation staff and its consultants believed that the city had no option but to close the street and to look elsewhere --like Devonshire-Otis-- for its major northbound route in the future. So the engineers were agreeable to closing the street, not based on the criterion that a mall had to be created to achieve environmental quality, but on the basis that the street could not remain open. The Washington-Tremont pair was, in the view of this segment of Logue's staff, not the most viable longitudinal circulation pair in the network.

But counterplanning was not the engineers' responsibility at that time. The design and planning staffs were unmoved by assurances from the transportation consultants that Gruen's proposed circulation system would work very well. It still entailed unacceptable costs and was no better, save for accommodating increased capacity, than the existing system. And the designers did not want increased capacity. In the counterplan, there would be no mall on Washington Street.

Pedestrian malls were not anathema at the BRA as a design solution where the criteria
suggested it. Three centuries of urban development in Boston had bred many fine areas other than parks for the use and enjoyment of the foot-bound citizen. Commonwealth Avenue, Paul Revere Mall, Spring Lane, and the like had very real and established pedestrian purposes. Tunney Lee never opposed the mall concept provided its implementation did not interfere with other values. "It just doesn't mean anything unless you can get it cheaply."

From the outset of his participation in the CBD project, in fact, Lee advocated the very strong east-west pedestrian connection along Summer Street from the retail center to South Station and agreed in principle with Gruen's recommendation. In early 1962, in connection with the Regional Core Plan, Lee had worked on a special South Station study that included a Summer Street axis. Therefore, Lee was quite willing to study possible north-south pedestrian channels, especially as he believed that Gruen would be critical of any counterplan that had dismissed the idea entirely. As a result, Lee searched for, and found, a new route.

The counterplan that was shown to Logue, Gruen and members of the CCBD Executive Committee at the beginning of May 1964 maintained Washington Street as a major road and, as a result, obviated the heavy demolition scheduled around the periphery of the project area under the draft urban renewal plan. It replaced Gruen's mall with an almost continuous pedestrian area from the Government Center south to the Hinge Block, following the path of existing roads and alleys mid-block between Washington and Tremont Streets. In concept it resembled Gruen's plan except that the mall and ring road were shifted to the east, making a tighter, elongated loop system. In reality, it placed the mall one-half block out of phase with the existing spatial distribution of key retail

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34 Interview with Mr. Lee, June 3, 1968.
FIGURE 7. -- FEATURES OF THE COUNTERPLAN, MAY 1934
activities in the CBD. To compensate for an evident incongruence, the BRA designers took advantage of a difference in grade between the mid-block mall and Washington Street, due to the slope of Beacon Hill. The new mall was actually at the same elevation of the second level of the stores on the west side of Washington Street, allowing Washington Street to be bridged over conveniently at about half a dozen locations to make a strong lateral tie between the mall and the major retail magnets in the core. In few other respects did the BRA staff offering deviate from design possibilities already at hand, although many independent issues were yet to emerge. It did shift rather dramatically the emphasis to the Ladder Blocks which, eight months before, had been a sub-area of the project for which improved servicing had been about the only important goal and, barely five months before, teetered on the edge of being programmed into virtual extinction with the introduction of large-scale redevelopment of the neighboring Avery Street area. Now, according to the counterplan, these blocks would be the focus of the main project rebuilding costs. The plan was, therefore, asking the decision-makers to affirm a significant shift in policy. 35

Logue was somewhat negative about the proposal, while the CCBD members were warm to the implications of the design possibilities. Now, however, Victor Gruen had occupied a role that allowed him to behave like a Client, with license to react to the proposal much the same way the BRA staff had done at his expense that previous January. The shoe was

It may well have been that eventually the Ladder Blocks would have shared the spotlight anyway. Its status as a neglected child in the family of sub-areas was never really accepted by the Jordan Marsh Company, the largest of the department stores, and about the only large retailer who recognized that the stores in this area were not necessarily parasites but had legitimate drawing power in their own right, and thus, brought business downtown. Eventually, according to Tunney Lee, Jordan's would have pressed this argument. (Interview, June 3, 1968.)
on the other foot. Uncertain in their own feelings, both Logue and the CCBD turned to Gruen, their designer of status, for an appraisal of the new proposal. Probably to the surprise of many members of the BRA staff, the eminent designer did not take undue advantage of his new-found role to decimate the offering but, instead, was prepared to recommend it under certain conditions. He made evident, however, that the plan was "second best for the simple reason that it does not constitute a clear expression of the planning principles outlined in our preliminary reports in which I deeply believe."36 But, as Gruen admitted at the same time, under present circumstances the chances of executing the more feasible mid-block mall were better than those of the more desirable Washington Street Mall and, as long as this proposal did not close any options for the eventual creation of Gruen's mall, then it was fair to visualize the BRA counterplan as the first stage in a longer-range development plan for the CBD. Lee and his associates, in Gruen's opinion, had not really eliminated the Washington Street Mall; they had merely postponed it.

Several of the conditions under which Gruen would endorse the counterplan ultimately led to its downfall, despite the ease with which the various participants in the project could accept the rationality of the new proposals. First, he wanted more time for his staff to study the mid-block mall and the projected traffic volume on Washington Street, but it was clear to him in advance that no amount of evaluation on his part could ever reconcile the proposal with his image of an effective pedestrian mall unless the mall were continuous from Government Center to the Hinge Block. In the counterplan, Lee and the rest of the BRA staff depicted the mall as a series of disconnected pieces running between the rungs of the ladder, the east-west streets between Washington and Tremont. Most of

36 In a letter inserted in the minutes, op. cit., June 8, 1964.
these streets had to be kept open to trucks and automobiles, for circulation and servicing reasons on which the success of the entire plan was contingent. Thus several pedestrian grade crossings, including a major one at State Street between the CBD and the Government Center, were in the plan, and Gruen asked that they be eliminated as a condition of his endorsement. Second, the connections to Washington Street were weak, despite the conscious efforts of the designers to make them work. Gruen asked that they become emphatic, possibly by having more of them.

The BRA staff, especially Lee and Hazen, refused to concede to Gruen on these points. The grade crossings would remain: that is, neither the streets would be closed, nor, alternatively, pedestrian overpasses constructed. The counterplanners simply did not view the discontinuity as existing in reality, but only on the two-dimensional plan drawing. People would cross these streets easily enough without the expensive devices proposed by Gruen. Further, it was likely that the expensive lateral connections to Washington Street would be fewer, rather than more numerous, in the long run. Hazen, anxious to keep the process moving now that it had gained momentum, countered with the contention that the general concept was sound and should be accepted, and the design consultants should now shift their attention to detailed feasibility studies of the mid-block mall and the servicing proposals.37

There was, of course, a wrangle on this new stand-off between the BRA and its design consultant. Logue sat as the ultimate arbiter once again. Gruen assembled an impressive case against the feasibility of the mid-block mall, drawing equally from the practical limitations on implementation that detailed studies showed existed, and from his

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37 In a memorandum from Mr. Hazen to Mr. Brinley Hall of the CCBD staff, included in the minutes, Ibid.
perception of the philosophical deficiencies of the proposal as well. Gradually, during the summer of 1964, the counterplan was dismantled and, as far as the BRA staff was concerned, the search for design possibilities had been exhausted. It was time to recognize that the probability of a north-south mall of any import had vanished and that design efforts, already inordinately expensive, must now move away from conceptual studies and toward amalgamating the pieces of the plan that remained. Detailed studies of the sub-areas were now the next step.

From the Blue Nile to Chauncy-Arch: From Search to Seizure

Gruen, however, refused to acknowledge that the issue was closed. The no-mall plan, which he considered a compromise solution, was untenable, for too much had been compromised on his part. There would be an east-west pedestrian corridor along Summer Street, but no comparable magnet along the historic axis of retailing in downtown Boston. This would kill the Washington Street trade by attracting business and new development elsewhere. In addition, the same inadequate circulation system would continue to exist. At Hazen's insistence, Gruen proceeded to carry out his share of the detailed studies but, at the same time, insisted on searching for another alternative to the compromise plan. Thus, the central role in developing design possibilities once again shifted to Victor Gruen Associates.

The alternative that Gruen outlined to the CCBD executive committee in August was simple enough, and may well have existed as early as 1962 in sketchy form, but certainly was never examined seriously until now. Since the mid-block line of alleys and disconnected streets in the Ladder Blocks had been considered seriously for costly transformation into a pedestrian area, why wouldn't the city likewise be open to the idea of a new road
on this alignment? If it were built, it could pair easily with Tremont Street and carry northbound traffic, thus liberating Washington Street once again from the oppression of the automobile, to be handed back to the exclusive use of the long-suffering pedestrian. Gruen noted in his presentation that the new road, dubbed the "Blue Nile" because for the presentation it was drawn on a map in blue pencil as a meandering line through the mid-block area, was inferior to the Congress Street connection proposed in the draft plan, but was infinitely superior to the compromise plan on which work was already proceeding. In the view of some of the CCBD members and some of Logue's own design staff, this was a design possibility worthwhile investigating further. Thus, the emphasis in the design process once again shifted to a re-thinking of the very basic concept on which the plan would be erected. After two years of designing, the process had failed to produce the one critical decision that would spawn a plan.

Inspection showed that the Blue Nile was indeed highly efficient from the point of view of traffic operations. In conceding this the BRA also noted that it would add approximately four million dollars to the already taut budget for the project, plus untold costs in terms of lost development in the Ladder Blocks on land used for the road. Also, the relocation problems would multiply considerably. In effect, the Blue Nile required a transformation of the Ladder Blocks and the Avery Street area that would run counter to objectives for the area. The CCBD Executive Committee, which by this time had become a veteran client group accustomed to its role and confident in its performance, easily assessed the difficulties posed by the Blue Nile and requested that Gruen drop it from consideration. Thus, by early September, 1964, after having witnessed a parade of circulation alternatives for the retail core, and the increasingly irreconcilable positions of the BRA and Victor Gruen Associates, the CCBD returned to what appeared
the only probable lines along which the planning could proceed. It adopted a position of accepting the compromise plan, if it could be made flexible enough so that the options on Washington Street were not closed. It saw some combination of the Blue Nile and the counterplan as offering the best method of doing this, and decided to begin contemplating, as Gruen had suggested, both the immediate and the ultimate future of Washington Street:

It was decided by the Committee that we should go forward with the main thrust of our planning to leave Washington Street open to vehicular traffic for the immediate future, with the possible exception of trucks exceeding a certain weight but study the factors involved in so designing the "Ladder Blocks" that they could be adapted in the future to carrying for several blocks the traffic now using Washington Street, thus permitting the closing of at least part of Washington Street to vehicular traffic at some point in the future. 38

As a decision that attempted to satisfy everyone, it satisfied no one. Victor Gruen, obviously, was not going to get his mall right away and it seemed he wasn't even receiving a firm promise of it in the future. For the design consultant, the issue was now one of priorities, a dispute that shortly would snare many more participants. For the BRA staff, however, the low priority now given to the mall by the CCBD was appropriate, and a vindication of staff design efforts. However, if the mall should ever be built, even partially, the Ladder Blocks could not easily be adapted for the purpose of a by-pass road. Hazen then raised a new question with the businessmen: If the operational problems along Chauncy Street, a block east of Washington, were eased, through widening the road, and if its clarity were strengthened at its northern end by cutting through to Court Street rather than circuitously routing traffic onto Franklin-Tremont (as one version of the counterplan had suggested), would the CCBD consider this a better alternative to

the Blue Nile? With an affirmative answer in hand, Hazen instructed his staff to make some studies of Harrison-Chauncy-Arch as a long-range CBD by-pass role.

A casual familiarity with the downtown street pattern is all that is necessary to indicate the evident by-pass connection that this system provides. What had prevented its serious injection into the process until now, late in 1964? It was very much a question of the effects of timing of solutions on the perception of the problem: fewer practical constraints need be considered the further into the future the possibility of the by-pass was propelled. Let us sketch out the situation with which the participants were dealing.

If one were to diagram, in the sense of grand planning, the most clear and direct method of achieving the Washington Street mall in the context of a Tremont and Chauncy-Arch pair of one-way by-pass streets, one would draw a straight line from the point of intersection of Arch and Franklin Streets to the beginning of Cambridge Street, at the northwest corner of the project. This would simulate the desire lines that were the premises of circulation planning: the split one-way pair being a continuation of Cambridge Street, with the heart of the retail core resembling a median strip between (see Figure 8). This was impractical, constrained from ever being seriously received because of the substantial clearance involved. Further, several of these buildings had more than mere physical significance—such as the existing City Hall complex—and, as the time went on, the value of such structures essentially would appreciate. They were clearly untouchable.

The counterplan had shown one of two possible alternatives to the direct connection described above. Along the lines of least resistance it diverted north-bound traffic to Franklin and thence to Tremont before tying back to Cambridge Street, but this was
FIGURE 8. -- THE BLUE NILE AND THE CHAUNCY STREET ALTERNATIVES
a complicated route and, as already noted, was discharged several months before. The other possibility was to divert the north-bound traffic to the east-side of the desire line, to extend Arch Street until it met and converged with the upper end of Washington Street before joining Court Street which, in its turn, connected to Cambridge Street. Simple enough in concept, and with greater clarity than the Franklin Street alternative, this design possibility had been rejected very early in the process mostly because the bulky, lackluster, venerable, and very highly assessed Old South Building stood squarely in the way.\footnote{The alternative was also judged improbable by some people because it would destroy Spring Lane, a small pedestrian alley aside the Old South Meeting House that was of some historical importance. However, the acrimonious dissension that initially accompanied this gradually dissipated and, by the time of the reconsideration of the alternative, it received scant attention.} This office structure, at the foot of School Street, was worth several million dollars at the time, a cost not easily justified by the BRA for the mall on Washington Street. In addition the building returned a fair revenue to the Old South Church. As a means for achieving the mall, therefore, this alternative was too expensive for the City. The Old South Building was listed among the most sacred of all the downtown shrines that had to remain.

But the major difference between the Old South Building and many other edifices on the list was that, over the years, its value was likely to depreciate rather than grow. While it was financially out of the question for the BRA to acquire the property within, say, the next five years, might this also be the case in ten or fifteen years? In answering this negatively, Hazen steered the CBD design process onto a dramatic new course.

The BRA staff in the fall and winter of 1964 now developed a two-stage strategy for the Central Business District. Stage One would be the Urban Renewal Plan itself which, much to the chagrin of Gruen, would show Washington Street open. Stage Two, which
could be an amendment to the Plan at some later date, would specify the necessary acquisition (including the Old South Building) and improvements in Chauncy-Arch, in the event that it was ever decided to close Washington Street in favor of a mall. All that would have to be done to keep the option open was to include controls in Stage One which would prevent the rebuilding or extensive rehabilitation of properties that would be required to be taken for the Chauncy-Arch alignment in Stage Two. This strategy, of course, would assist in insuring even greater depreciation of property values on the route, much the way tentative highway proposals through built-up areas will tend to affect property values long before positive public action is ever taken. The strategy could almost be self-fulfilling.

It was a sound plan, as far as both the BRA and the CCBD were concerned, though many details had to be considered. In fact, as the staff began to define the route more carefully in revising the draft Urban Renewal Plan of the previous January, Harrison-Chauncy-Arch worked so well that some members, including Hazen, were seriously reconsidering whether it might well be worth the cost to give it higher priority. Now, the question of priorities was beginning to emerge among BRA staff people.

**Early Land Acquisition**

Before very much could be decided on the details of Chauncy-Arch the staff was requested to assess all the priorities, the whole sequence of implementing the plan, as the BRA made ready for Early Land Acquisition. This device is a simple and very reasonable option open to communities engaging in the urban renewal process, but the

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40 Interview with Mr. Lee, June 3, 1968.
mechanism can be deceiving in its influence on designing. Under Early Land, the Federal government provides for implementation without a plan, by allowing local communities, upon demonstration of "blight" in the affected areas, to acquire portions of a renewal project area in advance of the final renewal plan. The purpose is to encourage and facilitate certain demolition and relocation activities where such activities are expected either to be very long and complicated processes within themselves, or, as is the more usual case, to commence the preparation of sites for private sale or public improvements where this activity is desirable to start early in execution so that other work may follow smoothly. Early Land Acquisition is, therefore, a strategic ploy, impacting on the timing of the entire renewal effort. Illogical in the very pure sense of planning because there is no comprehensive plan against which these acquisition decisions supposedly may be matched, it is defended simply on the grounds that the properties designated for premature acquisition are so delapidated that such acquisition would have to be ordered, no matter what the characteristics of the final plan. True to the philosophy of urban renewal it is current status, rather than future prospects, that theoretically justifies the concept. Implied in the justification for early land takings is the assumption that certain of them can be performed without affecting the rest of the area or the planning effort, without changing the problem, and without affecting future design possibilities, even in the pockets actually being acquired.

In practice decisions on an Early Land program in most cases --certainly in the case of the Boston renewal program-- rarely occur before a plan is fairly well along. Despite an elusive circulation system, the CBD plan, for example, had achieved a reasonably advanced state. Most participants were confident of decisions on Summer Street, Old Boston Center and many minor street adjustments. Also practically speaking, the
determination of blight is broadly based but strictly a matter of local determination, which means that the local public agency can in fact exercise far greater influence in early land cases than the regulations would appear to indicate. But evidence of blight, real or imagined, with or without reuses in mind, still doesn't make Early Land mandatory. The opportunity to buy the bankrupt South Station at that time, rather than the technical necessity, motivated the Early Land program in the CBD, spurred further by the interest expressed in some quarters (mainly by the Massachusetts Port Authority) in negotiating an independent purchase of the property. Unless the BRA acted promptly, the renewal of the CBD might hinge on an uncontrollable variable. The agency had no choice but to buy the sprawling terminal complex at Dewey Square and extend the project's boundaries to embrace it if it wanted to control its redevelopment.

Establishing Priorities

The effect of decisions in Early Land on the design process in the CBD cannot be overstated because, in spite of assumptions to the contrary, problems and possibilities were affected as a result. For the most part, Early Land committed the plan even more closely to the BRA's image of the area and further from Gruen's. South Station was a key. When its acquisition and relatively early redevelopment became real, it effectively meant that early in the project the east-west retail strip would also become real. It committed the City to Summer Street's renaissance. Many designers at the BRA, especially those who had participated in the process of designing the regional core, felt a great need for penetrating the core from the edge, where parking was muchmore feasible, than rebuilding the core first by the expensive inclusion of "interior" parking facilities. A multi-thousand car garage in the South Station area was very possible,
making Summer Street a natural connector between two downtown nodes. This decision relegated the Washington Street Mall and Chauncy–Arch even further down the ladder of priorities.

The debate over priorities was continuing to take on increased significance, and the lines were becoming more crisply defined. Priority recommendations on the order in which plan proposals should be implemented ought to reflect the ranking of plan objectives. In reality, this was fairly impossible to achieve in the Central Business District. First, there was obviously not complete agreement among participants on the rank of objectives, though the gaps were narrowing. The bigger obstacle that was emerging was the disagreement over which measure of the connection of designs to objectives was better to use where a conflict presented itself. The problem was transforming designing criteria into measures for evaluating design possibilities. Ideally, the proposals that should be received beneficiently were those which would accomplish the goals most effectively and least expensively. But what happened if the most effective means was also a very costly strategy? The Washington Street Mall was the clearest example of this. To Gruen, improving downtown amenity as quickly as possible was the key; to the Bra staff, that much amenity wasn't worth 12 million dollars. Evaluating at the margin, it seems, was critical. To the BRA staff, the difference in effectiveness between the Mall and the related circulation improvements and a priority list which gave top billing to the Summer Street–South Station area, the Ladder Blocks, and the Hinge Block was marginal compared with the difference in cost. Except for a few issues of land use yet to be resolved, it was clear that the plan, as it stood by the Spring of 1965 was fixed relative to the way the CBD would look a generation from now; how it would look in five years was still anyone's guess. The plan, as we shall see, wouldn't be the target for
significant further change; the priorities would.

Victor Gruen Associates were prepared to extinguish the fire under the cauldron.

In May of 1965, the consultants presented another revised draft of the plan. The document incorporated the Chauncy-Arch by-pass, and was accompanied by a "comprehensive" development plan indicating the future Washington Street mall. Gruen had adopted the Summer Street proposal of the BRA and endorsed the continuous pedestrian platform a level above the sidewalk on the south side from South Station to Arch Street that is so powerful an element in the final plan. The South Station area, on which the BRA was about to solicit firm proposals from prospective developers, was given a strong retail focus, as the plan designated a department store there in addition to a 5,000-car garage. The Hinge Block was Gruen's real choice for the store in plans for a maximum-length north-south mall; he wished the principle to be applied even though the orientation had changed. Thus, Gruen, who still vociferously maintained that no plan could be as successful as one which included immediate construction of the Washington Street Mall, nevertheless bowed to the strengthening alliance between the BRA and CCBD, and prepared a plan very much on their terms, doing his best to make their priorities stand up to his measures of effectiveness. If he were an obstacle to a plan acceptable to other major participants, he appeared willing to cease and desist. It has been described by several participants as the consultant's "last try" at establishing some rapport with his clients, being prepared now to suffer with what Gruen considered a second-class solution in the interest of group harmony.

Seven months later, and for the third time, the Washington Street Mall was reinstated in the Urban Renewal Plan as its dominant element with clear priority.

Gruen's plan --with a by-pass but without a mall-- reflected a viewpoint that had
been brewing within the BRA transportation department ever since 1963. It was not an anti-mall bias, however, no more than the designers' concerns about the consequences of closing Washington Street were necessarily based on distaste for the concept of unimpeded pedestrian rights-of-way. The designers had begun to believe, in fact, that the Mall and the Chauncy-Arch improvements need not be linked, that the future traffic demands of the area were not so overwhelming that Boston needed the complete by-pass in order to restore the pedestrian to Washington Street. The engineers, of course, believed the mall could not be built without Chauncy-Arch. After examining the consequences of widening Chauncy-Arch in terms of the social and physical costs, the designers had concluded that, if the engineers were right, then the mall wasn't worth it. This would probably have been decisive except the engineers were not finished. They argued further that, no matter what was eventually decided between Gruen and the BRA designers over the issue of the mall, the Chauncy-Arch by-pass must be built anyway, simply from a traffic standpoint, regardless of social or physical costs. It was an expensive proposal, but there was no alternative. If, however, the by-pass were built incrementally, a section at a time over a period of years, its costs may be reduced, or at least made more manageable. Of course, in suggesting this at the same time that it advised against closing Washington Street (if it were desirable) until the by-pass was fully complete, the transportation engineers were in reality pushing the mall still further into the future than even previous design recommendations had dared to do.

Inside the BRA, the mall slipping down the ladder of priorities, suddenly ceased to be the root of the issue. Logue was confronted with deciding on the efficacy of the by-pass regardless of the mall. As it was already decided that the mall must be a part of the CBD at some time, it became a matter, on the part of the designers, of convincing
Logue not to link it to a Chauncy-Arch development at any time. This was a struggle. Design was ill-prepared to fight because Transportation could muster data and analyses that were difficult to refute. The interdependence of the two physical elements was impressed on Logue by the engineers. If he wanted the mall, he needed the road.

That did not imply that priorities had to change necessarily. It was hardly a question of traffic data that caused Logue to put the mall (and, therefore, the entire bypass) back in the Stage I plan. That decision seemed motivated to a great extent by the sudden ambivalence on the part of the CCBD towards the mall. It now seemed, even to its major opponents, a highly desirable undertaking.

Sears Roebuck, standing far outside the mainstream of CBD design decisions unintentionally and indirectly promoted the change in mood. The plans for Early Land Acquisition had been made public in the late spring of 1965, along with the BRA's intention to accept bids from qualified and interested developers. The BRA had its own plan for the area already, but being a development agency as well as a planning force, the BRA would, of course, let probable development be a determinant of possible plans. Effective public policy must account for the likely future, if only as a benchmark against which to measure the comparative feasibility of policy alternatives. Gruen had been emphatic in saying that, if the City were serious about the Summer Street Mall, then a magnet—in the form of a department store—was necessary at the South Station terminus. The Sears-Roebuck Corporation had been scanning possible locations for an outlet in downtown Boston for several months, and within the CBD Sears had looked at Washington Street and at Summer Street near the hundred percent corner, but chiefly because of its parking needs, the Goliath of American retailing balked at any location so close to the heart of the core. Armed with Gruen's most recent plan,
BRA development specialists spoke with Sears representatives about reserving a niche in the future South Station redevelopment, and Sears expressed great interest in the idea. A five-thousand car garage was indeed a very attractive neighbor. It was beginning to look as if the Summer Street complex would become a reality, and a workable one at that.

It was a bit too much of a reality for certain of the leading Washington Street merchants. A department store at South Station was a reasonable idea but, to some members of the CCBD, Sears was an unreasonable choice, because Sears offered considerable competition. They began to believe that a department store such as was looming on the horizon would in fact work against the objective of revitalizing the core. If Sears was bound to be there, then perhaps the Washington Street Mall would be a good idea for business after all, and a good idea to program somewhat earlier in implementing the plan. Thus, for reasons beyond the control of the BRA designers, their alliance with the CCBD was crumbling. The businessmen were becoming anxious and unhappy. In late 1965, Logue was apparently able to read the signals that were being sent and, in addition to accepting Chauncy-Arch as a necessary component of the circulation plan, he decided not to implement it incrementally but to shun the costs so he could get to the mall as soon as possible.

A Problem Solved; But Whose Problem?

At the policy-making level, the issue of the Washington Street Mall and its consequences for the form of the Central Business District was dead, although it would

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Minutes, op. cit., August 9, 1965.
not be buried for another year, as we shall narrate in a moment. Toward generally accepted goals of improving environmental quality and reaffirming the presumed self-evident importance of the traditional heart of the retail sector of the metropolitan economy, a host of alternative physical possibilities had been generated, examined, refuted, and recast in three years. Some of these alternatives had sprung from doctrine while others grew out of the problems and potentials at hand. Yet the die was cast so early and so emphatically in a rather singular mold—horizontal separation of autos and pedestrians—that almost all of the many design possibilities were generated on this basic premise. Thus, one overriding criterion or operational statement of the goals reigned in the process of designing the featured locus of CBD redevelopment. But the problem as understood varied among the participants. This is clear from the evidence that almost all participants at one time or another saw unwelcome consequences to alternatives that, by available measures, "solved" the problem as stated so simply and eloquently by Gruen. The problem to be solved, then, was extraordinarily complex, and much effort was devoted to impressing the complexity on one another of the actors in the process by one or another of the other actors.

What, precisely, was the problem that was solved by Logue's decision? It may be wiser instead to ask whose problem was solved, that is, to conceive of the mall as an "urban service" and analyze its "distribution" in terms of the "population" served. Certainly the City's problem wasn't remedied to the extent it could have been. Boston's problem included transforming its physical form at least cost, and Logue chose an option that did not fully reflect this ambition of this client, thus failing in his original bargain with Boston, the Client-as-Purchaser. Not only was the decision expensive to build, but the City would have to maintain the mall once constructed and in use. Of course,
the City could be lulled into thinking that in the long run the money spent now could be recouped through the taxes added by the increase in the value of the downtown base. But there were discordant notes in the lullaby. A singular feature of the Central Business District as a design problem was that, at the very same time the situation was being treated as almost desperate, the area was picking itself up economically, so that the problem was continually reducing, making the solutions being proposed seem almost too drastic. The Dewey Square area, for example, was suddenly appearing viable again, as a resource for relocatees from the Government Center project who were now finding adequate space around South Station and along Summer Street. Indeed the plans for Summer Street might become harder, rather than easier, to implement as time went on by virtue of the dynamics of the problem that had made much of the relevant information of 1962 obsolete by 1966. Elsewhere, new construction was on the horizon, to begin even before the city would be in a position to offer the lure of urban renewal write-downs. Tremont-on-the-Common, a towering slab bloated with luxury apartments, was almost ready for occupancy. Developers were not waiting. Thus, there were indications that additional tax revenue would have flowed from the CBD and the rest of downtown without urban renewal. At least it could be argued that the situation did not demand the awesome public investment in the Washington Mall and Chauncy-Arch complex. As the City understood the problem, then, the proposal was a suspicious solution.

It is hard to say if the business men in the aggregate were the ones whose problem

42 Other incentives were available, of course, such as property tax arrangements whereby a payment in lieu of taxes based on rentals or occupancy is made. This protects the owner in the face of a slow and unpromising market but makes no guarantees to the City. As there is no federal subsidy to local communities, as with write-downs, the City under such arrangements was gambling on its future.
was solved by the decision. The object of the mall was to assist these Private Clients primarily: they were the population intended as prime beneficiaries. But toward what end the mall would render its services had changed by 1967. At the beginning the mall was an aggressive, positive element, an offensive device designed to attack a problem and help the merchants emerge with more than they started with. At the end, it was more a defensive weapon, used negatively just to maintain a stance, some equilibrium, in the face of competition from within the CBD, rather than improve a position with relation to competition outside the area, a position which, as we have suggested, may have been improving by itself. It cost the same either way, but the mall's benefits depended on the view of the problem. Regardless of which perception of the problem each downtown enterprise associated with evaluating mall alternatives held, its criteria for evaluation also included very personal measures of what it stood to gain or lose by several million dollars of public action. There were, therefore, opportunity costs in 1966 that were not apparent in 1962. The private cost of public action was not negligible in enough individual cases to conclude that the CCBD members and non-members alike were in fact the prime beneficiaries of the plan. Even Jordan Marsh, an advocate of the proposal, might have to pay for it after all, as its off-street loading facilities would have to be rearranged or even moved to permit the construction of the Chauncy Street by-pass. Filene's, always a reluctant, would not be able to assay the costs and benefits of the mall until after it was built, if then even.

The variation in costs was considerable, going from limited to insurmountable. For

43 Throughout 1966 and the early months of 1967, Jordan's wrestled with this problem and, until its own engineering studies demonstrated that the costs could be kept down, the store seemed prepared to withdraw its support from the whole idea. (Minutes, op. cit., March 20, 1967.)
the garment district the problem was one of staying afloat, and malls and by-passes weren't the conveyors of its kind of trade. The district would suffer more than any other by this key decision, simply because of its vulnerability to demise through dislocation. But some people --even at the BRA-- could rationalize the consequences: the garment district was dying slowly and painfully, but terminally, and maybe its problem was not to find ways of recovering but to reconcile the eventuality of its course. In this respect, the mall and the by-pass actually solved the district's problem. To some people it resembled a mercy killing.

The owners and tenants of CBD property could not be assured that, collectively, it was their problem which had been solved. On the other hand, the users of the CBD, the Public Clients, could benefit enormously from the improvements being programmed. The mall would be more pleasant and comfortable than the existing situation. But was it really the problem they would have preferred to have solved for them first? Or was a mall a nice bonus, something that they could have lived without for a while, especially in terms of costs? Were there other services they would have demanded before the mall? This was probably the ultimate snarl in the problem that the CCBD, the BRA, and Victor Gruen Associates tried to unravel. Both "city client" and "enterprise client" were represented in the process, officially, tangibly, and almost bureaucratically at times. But the "user client" was not identified so readily. He could be summoned occasionally through devices like origin and destination inquiries and market research surveys, so that policy-makers could get a sense of where he was going and what he was doing, but eavesdropping techniques have their limits. Monitoring the user's behavior hardly ever indicated where he would go and what he would do that would be different, better, worse, more, or less, if the circumstances were changed. Would he really come downtown
more often and spend more money if there were a mall? If there were a mall and more parking? Or if there were just more parking? There was no theory of urban form by which such behavior could be predicted with any confidence. An alternative strategy in this instance was to look at enough cases of downtown behavior under the conditions desired, so that some relationships might be derived ad hoc. This was often Gruen's approach, but the examples cited never really satisfied other participants as to their similarity to the Boston case. Another alternative was to be introspective about it, a justifiable strategy since the participants in the process were also users of the area. The pitfalls are evident on two counts. First, each of the individuals who participated in the decision used the CBD in different ways. Second, it was highly probable that none of these ways spoke for the typical user, who was probably non-working, non-professional, and non-male. The businessmen probably came closest to making the identity simply because they supposedly would tend to observe their customers more closely than other participants might. But as they tended to be conservative in their predictions, downtown merchants were not always the best source of information about user behavior in non-existent spatial patterns. It was difficult to pretend to be a Public Client, though the role was occupied and played very often in the process. Thus, it remained a point of controversy as to what the users' problem was, and whether the mall and the by-pass made any significant strides toward solving it.

Our original question remains somewhat unanswered. It was probably the design problem as perceived by Gruen and by the transportation engineers at the BRA that was solved in late 1965. Whether this perception is more viable than that of the BRA design staff cannot be answered. Clearly the BRA design staff was upset. Tunney Lee left in early 1966 (though not exclusively because of the mall issue), and his successor, Ralph
Partan, was prepared to continue to argue Lee's case. The situation in which Partan had to operate was quite a bit different, however. The question of whether the mall and the bypass were linked developmentally had to be conceded, for the engineering data remained persuasive. Partan, therefore, had to demonstrate that the system as a whole deserved lower priority. His best weapon was still the economic one. Of the three clients that the plan had to serve in some mutually satisfactory combination, the City remained denied, in Partan's view. Eventually, Partan persuaded others of this inequity (including some of the engineers, who felt that in the interest of saving money, it might be possible to live without Chauncy-Arch for a while) and later in 1966, got the issue back to Logue again.

Nailing Down the Mall

This time, however, the BRA Administrator had an additional factor to consider in re-evaluating the priorities, one that illustrates how sensitive the urban design process is to external factors beyond its control. Some of our interviewees are of the opinion that Logue acted out of self-interest in rejecting Partan's appeal. That stands as one interpretation since Logue, like anyone occupying the role of Decision-Maker, is never in the position of acting "so as to forestall all possible criticism." But another interpretation also prevails. Logue's plans, as a rule, while they may often fail to measure up to "professional" standards, do not usually fail politically. While it may be true that he needed the idea of the mall to gain certain personal political ends, it is conceivable in the circus ring of Boston politics that he may have had to manufacture a new political environment in 1967 to gain the mall --and other parts of his program-- in reality. Either way, Logue wanted to be the next Mayor of Boston. John Collins had first run for the office in 1959, 44

and again in 1963. By the middle of 1966 it was fairly evident to the fraternity of second-guessers outside the privy circle surrounding Collins that he would not make another bid in 1967. Since Logue was a charter member of the circle, he probably knew for certain. The mayoralty race would be wide-open, but if Collins left office the target of popular applause for an eight-year term built largely around the massive regeneration of Boston, then Logue, his master-builder, stood an excellent chance of riding into the job on the echo of those plaudits. The campaign was a few months away, as was the scheduled public unveiling of the CBD plan. The coincidence of timing could be very important and could be used to advantage in Logue's bid.

Other candidates were casting about for issues and support, and urban renewal was a fragile enough program in certain quarters so that a continued sympathetic chief executive was not a guarantee. The mechanisms that Logue and Collins had labored so diligently to establish could rust away overnight. And the attitude of a new City Council could also jeopardize the program.

It would be important that the CBD plan and any other proposals originating in the City Hall Annex before the election offer appealing and dramatic solutions to problems. Logue was a dramatist anyway, in the eyes of colleagues and minions alike, but often was constrained in his activities by the exigencies of urban renewal in a quasi-hostile political atmosphere. Every politician wanted a hand in writing the script, and many thought Logue should only be its producer though, of course, they could cast him as the author in case of trouble. The important rule for those who would engineer physical change in Boston is to get something socially and politically acceptable built, a rule we will study more carefully in Chapters Five and Six. Logue bowed to this dictum grudgingly at times, for it made no provision for quality, for getting the "right thing" built. If prosaic in substance
the act of change was important. But Logue wanted and needed drama now, of a kind denied to him in other spots in his program. Users of the CBD were also voters, and the users appeared to gain substantially from the mall. It was not fairly easy to justify the mall politically, especially with the CCBD behind the proposal. The appeal by the staff had little chance for success, and Logue once again supported inclusion of the mall --and the by-pass-- in the Urban Renewal Plan. Without emphasizing its low priority, Logue played up the concept in the public unveiling of the Plan.

Resolving Remaining Issues

Edward Logue would eventually lose in his bid for the key to the executive suite in the new City Hall rising in Government Center. His term at the BRA would end in the spring of 1967, prior to the campaign. The CCBD, knowing this in advance, was anxious to complete all planning by then. It did not want to overlap another development administrator. While the bones of the circulation system were being set, a number of other issues likewise pressed in on the group in 1966.

The CBD plan developed unevenly, as mentioned earlier. The BRA's dictate that no acquisition purely in the interests of circulation would be tolerated had gradually been discarded until, at the end, only two major acquisitions were recommended independent of circulation criteria, these being a dilapidated block on Washington Street into which one department store would relocate, and some properties in the Hinge Block. Almost all of the other new development areas in the CBD were delineated after decisions on the public improvements, usually based on land left over from circulation changes, and expanded

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45 Interview with Mr. Salvucci, July 15, 1968.
where necessary and possible to achieve marketable parcels of reasonable shape and size.

As the circulation decisions were proffered erratically, so therefore were those other decisions on areas where urban form would change.

While the choice of development areas was circulation oriented, and in the control of the participants in the process, the use of those areas was largely the product of whoever was willing to build there, outside the control of most of the groups and individuals already identified. There would be controls on form, of course, as stipulations of land depositions to private developers. Resembling conventional zoning regulations, they offer designers the opportunity to control certain physical relationships very closely. But although public agencies like the BRA include some constraints on actual activity in these disposition controls, they are in extremely broad terms most of the time. "Commercial" activity, for example, admits to many possibilities. Thus, they become loose enough in reality so that activity patterns—as components of urban form—are often outside public responsibility in the process of designing that form, left to privately motivated individuals to work out for themselves, and often by themselves. Insofar as CBD land use decisions were concerned, the market stood as the viable mechanism for specific, site-by-site land use and activity decisions. It was more important (except to certain participants) to have Sears locate downtown somewhere than to risk losing the store's interest by squabbling with it over

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46 The standard land use coding system recommended by several federal agencies identifies 772 land use activities, not counting certain auxiliary activities, that pretty well sum up the structure of urban activities from an economic viewpoint. These resolve into nine basic categories of land use, the so-called "one-digit" categories, which often reflect the extent to which local communities care to specify reuse in urban renewal areas. Thus, on the average, over 80 variations in each category are possible under this coding system. As this system does not classify on the basis of such factors as traffic generation, day vs. night operation, and so forth, it has limited utility despite widespread popularity.
specific sites. It was, to take another example, the market that would shape public policy on future land use in the Ladder Blocks, which meant that in this sub-area, except at the grossest level, land use was hardly a public policy matter after all. Victor Gruen’s attempts to tamper with market forces mid-way in the process (the Fashion Square concept) were quietly but firmly rebuffed. To a considerable extent, an attitude developed in designing the CBD concerning the responsible scope of public policy. Public policy, to be effective, must account for the likely future. The attitude was that the likely future of activities was probably a good future for the CBD, and thus should be left to develop itself. Mostly this applied to the single development parcels scattered throughout the CBD that characterized reuse planning in the project area. Two instances stand out as exceptions -- Park Square and the Hinge Block -- where relatively large sub-areas presented opportunities for framing more comprehensive urban form policies. In both the likely future, insofar as it could be predicted, was not cause for optimism, but the policy-makers were prepared to let the market be motivated to change it. In one case the market did not act in time to be reflected in the plan. In the other, the timing was better.

Park Square is an area of uncertain allegiance, sometimes part of the Back Bay, sometimes of the CBD. It could be considered facing on the Public Garden, or, alternatively, it could be viewed as backing up against it. The area’s ambivalence toward its surroundings has been reflected in its own internal character, an unimpressive melange of unstable uses orphaned by everyone else. Back Bay lovers claim Park Square belongs to downtown; Washington Street denizens eagerly endow it to the Back Bay. It has become a staging area in Boston, a melting pot of sorts, combining most recently such seemingly disparate activities as the University of Massachusetts and a Playboy Club, the staid Statler Hilton Hotel and Boston’s country-and-western music center. And it is criss-crossed with parking lots and too many
streets.

Park Square was an enigma to those who had to develop and evaluate alternatives on its future form, so ungainly a problem that it kept being pushed off until it resembled a johnny-come-lately addition to the process. Troubled by the problem, Gruen treated Park Square laconically in his Interim Report and, by Stage One, had succeeded only in promoting the desirability of new housing facing the Public Garden and some specialty commercial uses surrounding the Statler Hilton. Yet the area was in continuous flux, such that not even the Gibraltar of Park Square, the hotel, could assure the planners that it would continue to be a permanent fixture. The University's plans were always hazy, though the BRA was continually trying to influence it to go elsewhere, away from the central city, which it has finally chosen to do. A bus terminal, to travellers the prime image-maker of Park Square, had a clouded destiny that depended less on plans for a transportation terminal elsewhere (such as South Station) than on its willingness to share the new quarters with the other bus terminal in town. Neither bus company seemed interested in mutually cooperating in the idea at that time. Thus, the larger uses around which design possibilities for the area as a whole might rally were pursuing their own particular locational and economic problems, outside the control of the public sector. If there was any stability in Park Square, it seemed to be among the smaller orphans of the downtown economic structure. Bars, a joke shop, and night spots of dubious reputation all looked as if they would exist in perpetuity. Moreover, the buildings in Park Square were in generally good condition.

Ultimately the goals for developing policies and actions in Park Square reduced to three:

47 Interview with Mr. Beatty, March 19, 1968.
(1) improve the efficiency of the street system; (2) provide opportunities for new investment in commercial, residential, and transient housing; and (3) provide a high standard of design to take full advantage of the relationship to the Public Garden and the Common. The first operationally meant reducing the number of streets. The third meant design controls. The second meant the provision of development parcels, but, as it turned out, very few could be made available through the renewal process. Thus, mostly because Park Square will determine its own fate, the Urban Renewal Plan leaves it alone for private development. 48 Park Square, it seems, was too complex a problem for public policy-making: feasible alternatives never materialized, as the plan reflected public and private decision-making out of phase with each other. Time ran out on the decision-makers.

The Hinge Block, in terms of its likely future, was similar to Park Square, but the design and planning strategy for the 186,000 square-foot joint between the halves of downtown was the reverse, making it the one possible exception to the timid approach toward land use decisions that existed in the plan. If anything made the difference it was the condition of buildings, only two of which were considered substantial enough to be saved, according to the 1960 General Plan. Whatever its future, then, it was likely to be determined relatively speedily by the market. In this case, the public sector --as

48 The essence of public policy on Park Square was summarized thusly: "The ultimate development for Park Square is not at this time clear. However, one of two directions will probably occur: First, the improvement to public facilities and traffic along with the new developments created through the urban renewal plan, will stimulate additional private development in the adjacent properties. In this case, the principles established in the urban renewal plan will provide appropriate guides to such development. In addition, if the City Mart Garage is replaced, the opportunity for a more comprehensive improvement to Stuart Street frontage should be encouraged. If new private development does not occur, the second alternative would be appropriate." (Victor Gruen Associates, Inc., Boston Central Business District Planning Report, October 30, 1967, p. 125.)
represented by the BRA-- influenced the market.

"Hinge" was, of course, an attribute of the block denoting its large-scale import to downtown, but for many Bostonians it is probably perceived more vividly in a lesser context as a part of the entertainment district. Indeed, it could have been called the "Buffer Block" just as accurately, for at the small district scale, it served to separate the honky-tonk lower Washington Street area from the more legitimate theaters and movie houses of the Boylston-Tremont part of the entertainment district. Planners and designers at the BRA were conscious from the outset that whatever its future, designs must respect the dual role of the block in downtown. At the large scale it should be developed rather emphatically, so that its visual form would indeed psychologically hinge together the downtown. At the small scale, and with lower Washington expected to be upgraded, it must no longer shield one section of the entertainment area from the other, but should become a unifying feature of the district. At the large scale, uses were less important to control than physical form. The hinge of downtown could have been visually achieved by a strong landmark, for example, by a tall and distinctive building. It was at the small scale where it was crucially important to maintain control over as many aspects of the development of the block as possible. The uses had to be predominantly leisure-time oriented in keeping with the area's character, and the three-dimensional arrangement of all this activity had to reflect and encourage access and circulation to and through the block.

The BRA plan for the Regional Core embodied these objectives in a proposal combining restaurants, a hotel, and other commercial services with new theaters, all grouped around an outdoor plaza-theater in the middle of the block with pedestrian access to each of the four corners, so that the block links together the Common, Lower Washington, Tremont Street, and the New England Medical Center. Tunney Lee had assisted Crane in developing
this concept and carried it into the CBD design process. However, according to Lee, there was resistance on the part of some of the other participants to pressing the concept and keeping the Hinge Block in the project area. The primary objection was the very same one as throughout the CBD: the City must defer on matters of land use to the private sector; as there was no developer on hand, it was therefore impractical to make the dreamy concept a matter of serious public policy and it should be dropped from the plan altogether rather than risk difficult and tedious amendments to the plan when the likely future of the area was determined. But the designers were stubborn in their insistence that the city control the future of the block somehow. It was too important — more important than Park Square — to be left to the market.

The market, as it turned out, began to respond favorably to the concept. The Charles Playhouse became interested in making a move, and the Bay State Arts Foundation, when queried, also expressed an interest in helping to develop cultural activities. The Boston Zoological Society seriously proposed a high-rise zoo on part of the site, perhaps twenty stories high, and in late 1966 had some architects studying its feasibility. The BRA and the CCBD even went so far as to publish a prospectus on the area, such was the increasing confidence in the ability of the public interest to be served. When one of the two substantial buildings was purchased (the Touraine Hotel), a likely developer emerged who, although he had little interest in a zoo and helped to destroy the idea, was interested enough in the possibilities of the rest of the block for special entertainment and residential uses to convince skeptics at the BRA of the feasibility of the plan. The likely future of

49 Interview with Mr. Lee, June 3, 1968.
50 The Hinge Block: An Opportunity for the Arts in Boston, Fall 1966.
the area was now dovetailing with the desired future, and the Hinge Block almost as visualized by the comprehensive planners several years before became a permanent part of the CBD Plan in 1966. In contrast to Park Square, policy on the Hinge Block was settled and secured by the end of the process.

The Year of the Plan: Some Concluding Notes

Nineteen-sixty seven was the Year of the Plan. In February, the CCBD reviewed a final draft that represented four and one-half years of solving problems in central Boston. The product was a 115-million dollar prescription for physical change in which Victor Gruen got his mall, the BRA staff got South Station, Summer Street, the Hinge Block, and the Ladder Blocks, the CCBD got improved parking, service and access, and only 22% clearance, and the City got a dramatic look at its downtown in 1975 in addition to getting stuck with the bill. The plan was an exercise in solving problems in the absence of a consensus on those problems, where "the art of the possible" became the art of defining the possible, and where both problems and possibilities seldom stood still long enough to permit decisions made at one point in time to seem very rational at the next.

It was a plan with one overriding concern -- the fate of retailing as a function of the fate of the shopper-- that even as late as March 1967 saw leading merchants prepared to face in principle, but not in fact.\textsuperscript{51} It was a plan in which the problem wasn't solved in toto but as a series of "independent" sub-problems, and with varying degrees of sophistication and refinement. How independent these separate tasks were in reality likewise seemed to change over time, making the problem even more complex. Over the long run of almost

\textsuperscript{51} See our earlier discussion of Jordan Marsh's servicing dilemma.
FIGURE 9. -- ILLUSTRATION OF THE FINAL PLAN FOR THE CENTRAL BUSINESS DISTRICT, OCTOBER 1967
<table>
<thead>
<tr>
<th>Number</th>
<th>Location</th>
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<tbody>
<tr>
<td>1</td>
<td>Old State House</td>
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<td>2</td>
<td>New Office Tower</td>
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<td>3</td>
<td>New Parking Garage</td>
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<td>4</td>
<td>New Office Building</td>
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<td>5</td>
<td>Old Corner Bookstore</td>
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<td>6</td>
<td>Old City Hall</td>
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<td>7</td>
<td>King’s Chapel</td>
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<td>8</td>
<td>Parker House</td>
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<td>9</td>
<td>New Commercial Building</td>
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<td>10</td>
<td>Old South Meeting House</td>
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<td>11</td>
<td>Post Office</td>
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<tr>
<td>12</td>
<td>New Commercial and Parking</td>
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<tr>
<td>13</td>
<td>New Office Building</td>
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<td>14</td>
<td>New Raymond’s and Parking Garage</td>
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<td>15</td>
<td>New Commercial Building</td>
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<td>16</td>
<td>Conrad and Chandler</td>
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<td>17</td>
<td>New Retail Arcade</td>
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<td>18</td>
<td>New Retail and Office</td>
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<td>19</td>
<td>New Residential</td>
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<td>20</td>
<td>New Retail</td>
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<td>21</td>
<td>Filene’s</td>
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<td>22</td>
<td>Jordan Marsh</td>
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<td>23</td>
<td>St. Paul's Cathedral</td>
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<tr>
<td>24</td>
<td>New Commercial Building</td>
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<td>25</td>
<td>New Retail</td>
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<td>26</td>
<td>New Retail, Parking and Apartment Tower</td>
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<td>27</td>
<td>Tremont-On-The-Common</td>
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<tr>
<td>28</td>
<td>New Retail</td>
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<tr>
<td>29</td>
<td>New Retail, Parking and Office Building</td>
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<td>30</td>
<td>St. Anthony’s</td>
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<td>31</td>
<td>Record-American</td>
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<td>32</td>
<td>New Office Building</td>
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<td>33</td>
<td>Blue Cross Building</td>
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<td>34</td>
<td>New First National Bank Building</td>
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<td>35</td>
<td>United Shoe Building</td>
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<td>36</td>
<td>New Office Building</td>
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<td>37</td>
<td>New Office Tower</td>
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<td>38</td>
<td>New Retail</td>
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<td>39</td>
<td>New Major Retail and Parking</td>
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<td>New Commercial and Parking</td>
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<td>41</td>
<td>New Commercial</td>
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<td>42</td>
<td>New Office Tower</td>
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<td>43</td>
<td>New Office, Commercial and Transportation</td>
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<td>44</td>
<td>New Transient Housing</td>
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<td>45</td>
<td>New Parking Garage</td>
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<td>46</td>
<td>South Postal Annex</td>
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<td>47</td>
<td>Chinese Merchants Association</td>
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<td>48</td>
<td>New Parking and Commercial</td>
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<td>49</td>
<td>New Office Building</td>
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<tr>
<td>50</td>
<td>Masonic Building</td>
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<tr>
<td>51</td>
<td>New Commercial Entertainment Building</td>
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<tr>
<td>52</td>
<td>New Theatre</td>
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<td>53</td>
<td>New Public Space</td>
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<tr>
<td>54</td>
<td>New Residential</td>
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<td>55</td>
<td>New Transient Housing</td>
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<td>56</td>
<td>Little Building</td>
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<td>57</td>
<td>New Commercial</td>
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<td>58</td>
<td>New Residential and Commercial</td>
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<td>59</td>
<td>New Transient Housing</td>
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<td>60</td>
<td>Statler Hotel/Office Building</td>
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<td>61</td>
<td>Park Street Church</td>
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<tr>
<td>62</td>
<td>County Court House</td>
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<td>63</td>
<td>New City Hall</td>
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<tr>
<td>64</td>
<td>New England Merchant’s National Bank</td>
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<tr>
<td>65</td>
<td>Faneuil Hall</td>
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<tr>
<td>66</td>
<td>Custom House Tower</td>
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<tr>
<td>67</td>
<td>State Street Bank</td>
</tr>
<tr>
<td>68</td>
<td>New England Telephone Company</td>
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</table>
five years, the process remained faithfully sensitive to certain external factors but almost
dogmatically ignored others, a matter we shall deal with in a subsequent chapter. It
was not a hierarchically structured process of designing in the sense that the product in
1967 was simply the final step in successively more detailed analyses of a preliminary
concept postulated in 1962. It would seem that only Victor Gruen could claim his
experience in the process resembled this model, for his criteria and his design possibilities
varied but slightly in five years. But for other participants, the final product seems to
have resulted from totally different circumstances not existing at the beginning of the
process.

In late December of 1966 the Boston Redevelopment Authority approved in principle
the plan of its staff and consultants, a generally perfunctory gesture in urban renewal,
but a formality necessary to clear the way for the other steps in the sequence of
approvals necessary to move a plan from the drawing board to implementation. The
document was unveiled to the public the following spring.
Postscript

Our narration of the case of designing the Boston Central Business District ends with the public debut of the plan shown in Figure 9. Although this marks a convenient end to the work, in terms of the substantive efforts involved in developing and evaluating alternatives for the plan's many components, it by no means marks the end of the much broader process that per force includes other participants who affect urban designs by procedural, administrative, and financial decisions, who enter when designers, clients, consultants, and others are ready to leave, whose role in the design process is to transform it into a building process, and to whom downtown Boston, design objectives, Sears Roebuck, malls, and markets are of less interest than Congressional sub-committee hearings, the national housing shortage, or the costs of waging war on the other side of the globe. Indeed, transforming plan into reality, despite attempts of planners to account for them, may involve totally new criteria used by apparently unsympathetic strangers. In the case of the CBD there is an epilogue worth relating that explains why, at the time of this writing, the plan still sits in limbo except for some little pieces of it, the victim of forces quite beyond the control of those who labored to produce it. Brinley Hall, in his report to the CCBD at its 1968 annual meeting, provides the epilogue far more adequately than we could:

"In July 1967, at a Public Hearing in Faneuil Hall, the CBD Plan was presented to the Board of the Boston Redevelopment Authority, and thereafter, in August, was unanimously approved by the Board and forwarded to the Mayor for his endorsement and submission to the City Council. The fact that the autumn of 1967 witnessed a preliminary and a final municipal election in Boston provides a sufficient explanation of the reason why hearings on the Plan were not scheduled by the City Council's Urban Renewal Committee until after the election in November. While these hearings were in progress, the BRA received formal notification from the Housing and Urban Development Department (HUD) of the Federal Government that it did not have available the necessary funds to make the very substantial ($77,000,000) Federal Grant called for in the CBD Plan
and that under the circumstances, it could not and would not approve the Plan. This action by HUD cannot be said to have been wholly unpredicted in the light of the heavy financial pressures felt by all Federally-supported domestic programs, together with the adoption in 1967 of policies to accord strict priority to urban renewal programs concerned with relieving the housing shortage. Despite this Federal action, the City Council approved the Plan in principle, but, of necessity, refrained from taking any action to commit city funds to its implementation.

"Under normal circumstances, the failure to obtain Federal approval (and Capital Grant funds) for a Federally-assisted Urban Renewal Project would have meant that Boston's CBD Project was "dead", or, at the very best, that it would remain in what HUD calls the "Survey and Planning Stage". As it happens, HUD has not only stated that this Project may remain in that stage, but has indicated a willingness to advance additional funds to finance further CBD planning activities.

"There is, however, one unusual circumstance in our CBD Project, and this arises out of the so-called Early Land Acquisition Program, which as you may recall, was approved late in 1965 at all local levels and also by HUD. Approval by HUD had the effect of obligating it to loan (not grant) about $15,200,000 to Boston (BRA) to enable it to acquire certain designated properties and to dispose of them (for redevelopment) pursuant to the provisions of an over-all CBD Plan, which, at the time, had not been fully completed or approved. This loan provided the funds with which the BRA acquired the South Station property, the Raymond's properties, the School-Washington Street corner, the old R.H. White (City Mart) property, and property at the corner of Boylston and Washington Streets. The loan, not having been repaid, remains outstanding on HUD's books and constitutes to HUD a source of embarrassment. In short, they would like to get it off their books. The only way this can be accomplished is to convert the loan into one or more Grants, and the only legal way to achieve this result is to convert some or all of our CBD Early Land Acquisition activities into one or more separately identified, approved, urban renewal projects qualifying for Federal Grants, which, when made, will liquidate the existing loan. The line of reasoning, as well as the mechanics of implementation, may not have strong appeal in the business community, but some justification therefor may be apparent if one contemplates the likelihood of Boston's willingness, and even its ability, to repay to the Federal Government a loan of this magnitude, incurred solely in connection with Federally-sponsored urban renewal activities.

"The result of the foregoing set of circumstances is that HUD has strongly encouraged, if not directed, the BRA to proceed with the preparation of formal, fully documented, submissions for three separate Urban Renewal Projects, all within the CBD area and all having their roots or beginnings in the Early Land Acquisition Program which gave rise to the loan described above. These three relatively small projects have acquired locally the apt descriptive title of "Mini-Projects". Protracted negotiations between the BRA and HUD regarding the boundaries of the "Mini-Projects" and certain
related matters have been held, and we express confidence that virtually final agreements have now been reached.

"The three "Mini-Projects" now being readied for submission for approval to local authorities, as well as to HUD, are identified as follows: (1) School-Franklin; (2) Boylston-Essex; (3) South Station....

"...Viewed against the background of the vastly more ambitious over-all CBD Plan presented a year ago, one may be inclined at first to feel that we have indeed labored hard and long and produced the proverbial "mouse". It is, of course, disappointing that our over-all CBD Plan failed to obtain Federal approval. As indicated above, the reasons for this were largely financial and in no sense reflected adversely on the basic merits of the Plan itself. Furthermore, even had the Plan received Federal approval, it has long been fully understood by all concerned that implementation of the over-all Plan must of necessity be carried out in a series of carefully planned stages. Upon careful analysis, this is in substance what will be achieved through the execution of the several "Mini-Projects" described earlier. If it is reasonable to anticipate not only the probability of a termination of hostilities in Southeast Asia in the not too distant future, but also a quickening of the pace and enlargement of the scope of Federal assistance to the nation's cities, then it is equally reasonable to assume that the opportunity eventually to carry through to execution the remaining portions of the Plan has by no means been lost, but has simply been delayed."
CHAPTER FOUR

THE DOWNTOWN WATERFRONT-FANEUIL HALL PROJECT

At a point on State Street in downtown Boston, the boundaries of the Central Business District project and of the Downtown Waterfront-Faneuil Hall project come within 125 feet of each other. A sightseer walking through the project areas, absorbing and comparing the flavor of each, is soon likely to regard the proximity as an accident of geography, for, in many worthy respects—and in a few unworthy ones, too—these areas are each unique and dissimilar, and could just as well have been miles apart for all the overlap that seems to exist. Even within the Waterfront-Faneuil Hall project, as its very name suggests, our strolling observer would have no difficulty identifying two broad and distinct sub-areas, dramatically divided by the elevated Central Artery, the expressway, under which he must pass in semi-darkness and rumbling trucks and parked cars to get from one side of the project area to the other. In the CBD, the differentiation among sub-areas is subtle and appears at places to be fictitious, an artificial contrivance for planning purposes. There is an uncertainty about where upper Washington Street ends and lower Washington Street begins, for example. The edges of many sub-areas vary depending on the observer, as patterns of activities overlap in complicated and interesting ways before building up to their own separate peaks of predominant uses. Not so in Waterfront-Faneuil Hall. The differentiation is crisper, due mostly to the Central Artery. This is a mixed blessing, however, for the clear visual structure conceals much of the functional relation between the water side and the in-town side of the 104-acre project area. The
clear mental picture, it is argued further, only reinforces the physical isolation of the
wharves, the fish houses, the wholesaling and processing, and other waterside activities
which, though in apparent economic decline, still belong to the downtown scene and
contribute significantly to that quality of Boston which distinguishes the city from others
in the country.

Characteristics of the Project Area

If our pedestrian investigator stood on one of the wharves in the center of the area and
turned his back to the harbor, he would see the towers of downtown beyond the Artery.
The visual connections with the city are there, even if obscured. He could amble into
downtown along any number of routes: down Milk Street, by the Custom House Tower,
through the Financial District, and then, quickly, into the heart of the retail core; down
State Street, by the Old State House, and on to Court Street to the base of Beacon Hill;
along Market Street, past the long and solemn gray mass of the Quincy Market Building
and Faneuil Hall itself, until the new City Hall and the rest of Government Center are
at hand; or he could find Richmond Street, off to the northwest, follow it for a quarter
of a mile from the water, and find himself in the buoyant atmosphere of Boston's Italian
enclave, the North End. Abstractly, the connections are clear, for these streets resemble
spokes in a wheel, with the waterfront at the hub, and the rest of downtown strung out
along half the rim. It is partly the pattern of 17th century Boston, when the city first
depended on its waterfront for its livelihood.

On the ground, some of the connections are not so vivid: Milk Street changes
directions somewhere in the Financial District; Richmond Street at its origin reveals
little of the nature of the activities at its destination (but this heightens the effect as
FIGURE 10. -- MAP OF THE WATERFRONT AREA IN 1960
well); the spokes, as they fan out, encounter cross streets, and seem to succumb to them and take up roles in an 19th century grid pattern; and, of course, the elevated highway blots out many direct views along otherwise direct street connections. The highway, for all its vices, has a virtuous side. Over the inboard guardrail it provides the driver some quick but excellent views of downtown, and, above a nondescript assortment of rooftops and billboards, there are views in the other direction which hint at the openness of the sea, though drivers who actually see open ocean are really looking carefully. While at ground level the Central Artery acts as a barrier between two parts of the downtown, it is almost invaluable to the car-borne observer for visually stitching these parts together in a coherent way not otherwise possible. Except for the traffic, it's worth the trip.

The Waterfront project\(^1\) is an interesting case study of the urban design process for several reasons. As the foregoing implies, the contradictions in the area's characteristics challenge the urban designer. He is justified in developing an ambivalence toward the Central Artery, for example. At one and the same time, the visual and physical structures of the district have perceived assets and liabilities. The isolation and the meandering connections are both good and bad. Thus, the designer faces a task of reconciling a variety of conflicts inherent in the criteria of the problem. But this was a challenge in 1960 that was worthwhile for two reasons, which also contributed to the project's interest. First, the Waterfront was a project in which there were strong prior reasons to believe that urban designers could be a powerful influence in developing the total plan, for many of the economic and other constraints that emerged in the process of designing the CBD were

\(^1\)We shall henceforth refer to the Downtown Waterfront-Faneuil Hall project by its more popular abbreviation. It will shortly become evident our interests in this project lie almost exclusively in the waterfront portion of it.
apparently absent here. For example, the alternatives to existing land uses were not so limited at first. Declines in meat and produce wholesaling and in on-wharf activities were accepted as inevitable by the City, making the opportunities for totally new forms of development greater. Also, potential modifications in the circulation system were not, up to a point, likely to impede the efficiency of the system, so there was more apparent opportunity for extending design criteria to this element of city form and for integrating the street system into new design possibilities.

Second, there was the water. Whether by training or instinct, urban designers have an affection for the natural features of the environment that sometimes causes even the most subtle variation in terrain or the most negligible stand of water to be viewed as the single essential in a complex problem, around which all major design decisions focus. When it comes to assigning Nature a place in urban designs, designers act boldly. They will create lakes and pools where there is no water, they will mass earth into artificial hills in flat landscapes, they will sometimes plant trees where nature or man long ago decided to the contrary. The results have often been stunning, to the benefit of users of urban area. But the point is that designers themselves seem to be comfortable whenever they can relate man-made forms to natural qualities of the environment. Water is the dominant characteristic of the project area. Most designers, then, would have approached the Waterfront project zealously and, especially because policy on the wharves and their uses was within the range of their influence, would have regarded the meeting of land and sea as a particularly attractive and unique design opportunity.

Boston's harbor facilities rim almost all of the inner city that faces the sea, in Charlestown, East Boston, South Boston, and the downtown peninsula (see Figure 1). Around the peninsula the development is more or less continuous for a mile and a half,
from the Coast Guard dock immediately adjacent to North End Park to the point where the South Station complex flanks the Fort Point channel, the moat-like separation between downtown and South Boston. The piers and wharves themselves are sandwiched between the water and a wide and bumpy service road with a pair of railroad tracks down its middle known as Commercial Street as it circles the North End, and as Atlantic Avenue further south, in our project area.

Through the years Bostonians have managed to lash an irregular assortment of wharves to the Atlantic Avenue lifeline, and most of these are familiar to the local citizenry, even if many people can't recall too readily that Central Wharf is the one to the south of Long Wharf and Commercial is the one directly to the north, that the big power station sits at the foot of Union Wharf, not Sargents Wharf, or that the wharf between Rowe's and Central is India, not Indian. But not even the most astute Bostonian will be able to find the likes of Oliver's Dock, Pool's Wharf, or a dozen others we could name. They all vanished along with the original profile of the Shawmut peninsula, well before there ever was an Atlantic Avenue. Indeed, almost all of the project area of this case study was once the original Town Cove, a sheltered wedge of water that reached about to the point where the new City Hall stands, almost half a mile from the current edge of the sea. Long Wharf originally bisected Town Cove on its way seaward, but landfill projects destroyed the Cove and all but the little of Long Wharf remaining today, substantially rebuilt but serving, nevertheless, as a solitary reminder of the Boston harbor of three centuries ago.

History and the Waterfront are inseparable, and even urban renewal finds its antecedents there. The Quincy Market buildings, dating from 1824, are considered the first example of renewal in this country, because Mayor Quincy cleared a cluster of
century-old buildings for their development. Total cost: one million dollars.

Prior Design Efforts in the Waterfront

The old Boston City Planning Board included most of this Waterfront area in a Plan for the Central Business District, omitting only the northernmost tip, from North End Park to Union Wharf, or about a third of a mile of the harbor frontage. The plan was pessimistic about the future of the existing uses and concerned about the physical deterioration in the area. For the entire downtown, it projected a 43 per cent decline (in floor space) in wholesaling and manufacturing activities, and much of this would be in those activities in the Waterfront project area. Yet the pre-Logue planners regarded this functional demise, particularly at the water's edge, with cheerful optimism and had little difficulty communicating a wish to hasten it in favor of their glamorous view of the future:

Shipping activity along the Atlantic Avenue waterfront has declined leaving useless and hazardous piers. This area, more than any other part of downtown, has unrealized potential for being an attractive business, residential, and recreation center because of the water and harbor view. A new embankment parkway along Atlantic Avenue makes the waterfront more accessible and desirable still. New development possibilities to be investigated include: a downtown marina with associated ship services, excursion boat facilities, a new berth for Old Ironsides, waterfront parks, entertainment facilities and tourist attractions, a shipping museum, a motor hotel, offices, and apartments.

The 1960 plan offered few precise guidelines for achieving any of these possibilities, although it elevated the area to a high priority in its recommended CBD improvement program. The plan certainly failed to outline a design policy, and seemed to imply that

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2The 875-acre CBD has 18.7 million square feet of wholesale and manufacturing floor space, of which the area roughly coincident with our case study area contains over 5 million. See A Plan for the Central Business District, op. cit., pp. 11-13.
public investment in capital improvements in the Waterfront could be relatively low, that private enterprise would seize on new development possibilities without very much prodding from the public sector. Indeed, the Planning Board was entitled to this premise, for private realtors had, in 1958, purchased Long Wharf and India Wharf and had consultants studying their market potential very carefully. Of more immediate significance, however, was that private enterprise appeared willing and ready also to support planning for the Waterfront area as a whole. In late 1960, the Greater Boston Chamber of Commerce established a Waterfront Redevelopment Division, and provided the funds for whatever staff and consultants the division wished to engage in preparing comprehensive studies. It is with the beginning of work under the aegis of the Chamber that our study of the design process also begins.

Establishing a Non-Client: The Chamber of Commerce

Mayor Collins, newly-elected in 1959, championed an active Chamber role in the Waterfront, and was influential in its creation for reasons not unlike those which led to the CCBD two years later. But the Chamber in 1960 needed little encouragement, for it had been thinking for some time about what it should be doing in the massive revitalization of downtown that had been on the horizon for several years. In the golden jubilee issue of its magazine the November before it presented fanciful sketches by the local architectural society showing how the Waterfront in particular could be redone. The Waterfront, in the Chamber's view, was a natural. Here was Boston's "window on the world," begging to be washed. Here was an area that seemed to belong to everyone in Boston and, thus, everyone would applaud the active, unselfish role of the business community acting in the public interest. A Chamber of Commerce role would not only benefit Boston, but would
enhance the image of the Chamber itself.

Contemporary observers of the urban renewal process in Boston see parallels between the Waterfront project and the CBD project in the nature of the commitments of the business community to planning, and in the structure of the partnership between public and private interests. In both projects, and often from the same individual and corporate sources, private money and energies were enlisted to produce a plan. The involvement was tangible, specific, and responsible. The BRA would assist in any way it could, but Logue and his staff were minor actors until such time as the business community decided on an appropriate course of action. A lot of credit is given to this system of operation for the success of the renewal effort in downtown Boston, and the idea has been instituted in other project areas, such as the Back Bay. On closer inspection, however, the general similarities between the organizational strategies for planning the Waterfront and the CBD are not so meaningful in analyzing the respective design processes as are the distinctions that existed within this unelaborated framework.

Consider, for example, the difference in the stakes for the individual businesses pledged to participate in project planning. The Committee for the Central Business District was primarily a meld of businessmen with large property holdings and direct interests in that area, and for whom the economic health of the district had obvious and immediate implications for the health of their enterprises. Every key decision on the future of the CBD, then, had to be weighed carefully by the members of the group in terms of its impact on the firm and the investments he represented. Every member of the CCBD had to respond to planning in a manner not unlike the individual homeowner in a typical

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residential project. He was expected to be inner-directed and narrowly oriented; he could be excused for selfish behavior. Participation in the Waterfront project was another matter, however. The Chamber of Commerce was a large regional association, and only a minority of its members had territorial interests in the project area. Hardly any of the majority, including some of the same large corporations with parochial attitudes on the CBD, could view Waterfront redevelopment in personal terms. Even Boston's banking fraternity, with financial interests in the area, could not regard Waterfront renewal as threatening their business. Thus, the attitudes of the Private Client were almost reversed, a fact that most observers of renewal in Boston tend to overlook. The Chamber could respond to planning and design alternatives with equanimity and evaluate the prospects and consequences of development from an outer-directed, global point of view, measuring development in terms of its contribution to its image and well-being and that of the entire metropolitan region, and setting aside localized concerns. The CCBD could not.

Other differences are closely related to this. First, occupants of the Designer role in the Waterfront process did not find the Chamber to be a source of general constraints in the manner of the CCBD. Furthermore, primarily because the Chamber was not so intimate with the Waterfront as the members of the CCBD were with their slice of the central core, the client proved a poorer source of information in the Waterfront design process (not that the CCBD ever fulfilled its potential). Finally, it appears that the groups differed in their idea of what the purpose of planning should be. For obvious reasons, the CCBD played for all the marbles, and demanded a workable plan from the outset, one that would reflect real economic and political considerations. It is still not clear to us just what the Chamber wanted, but it was not this. One view has it that the Chamber was so thoroughly smitten with its new-found role as a benefactor of the New Boston that it came to value designs
for the area as an aspect of public relations. The bolder the proposals the better, as long as the Chamber's sponsorship was evident to the public at large. Another and more likely perspective on the situation holds that the Chamber believed it should sponsor a plan which, true enough, should be bold, imaginative, and capable of generating enthusiasm, but that it should also aim at handing the BRA a document from which more advanced surveys and planning could follow routinely and expeditiously. The purpose of the work at this time was to quicken the pace of the renewal process later, when the BRA was funded for the task, by demonstrating the area's eligibility for renewal. If the design concepts were not altogether workable, at least a significant start would have been made. ⁴

Who Designs?

Differences in client types were not the only contrasts in the social environment between the CBD and the Waterfront projects. In 1962, the BRA was a functioning arm of local government even though some kinks remained, such as staffing problems. Logue was firmly in control of the Boston program when the CBD process began. Two years earlier it was a slightly different matter. The Boston City Planning Board was not yet lifeless in 1960 and Logue the consultant was more a rumor than a reality in Boston. Gradually and unofficially, the New Haven renewal chief eased into the Boston scene, but until the BRA opened its doors in the spring of 1961, Logue's resources were scarce and his power was muffled. The business community especially had adopted a cautious

⁴For the record, it is our observation that some of the Chamber's design staff held still a third view of what they were supposed to accomplish, believing that it was just possible that they could develop desirable and feasible concepts from the very beginning. Consequently, there was a concern early in the process with "thinking ideas through" to implementation. In a sense, the design staff imposed a constraint on itself by virtue of regarding feasibility as a criterion from the outset.
attitude toward the new administration. Thus, while Logue endorsed the Chamber's role in the Waterfront project and was no doubt considerably relieved by the thought that it would finance development planning, his capacity for guiding and influencing that program would not fully mature for almost another year. Moreover, the Waterfront was not really that important to Logue in 1960. The Government Center project was the keystone of the downtown renewal program, and received top priority in the fledgling Collins administration. Further, Boston had to get in stride with Federal requirements for floating urban renewal, and General Neighborhood Renewal Plans--ten of them cloaking the entire city--appeared on the docket, exacerbating Logue's resource problems. Thus, the Chamber, almost by default, had to take a greater share of the initiative in getting the project underway than did the CCBD two years later.

The responsibility for this fell to Daniel J. Ahern, then the manager of the Chamber's Urban Development Department. Ahern, an energetic and articulate man in his forties, was very much a novice at the renewal game and depended in part on a set of intuitions that were generally reliable as points of departure into uncharted areas of decision-making. He was not impulsive, however, but was deliberate in his choices, and sometimes sketched out the alternatives as thoroughly as if a world war hung in the balance. He was anxious for, and could absorb, vast quantities of information, and usually could act authoritatively by the time decisions had to be made. He had a practical mind, but a fair one. While the power of the market as a factor in development decisions impressed him, he could just as likely support planning proposals of a radical, market-bending nature if he felt the goals were worthwhile. From the Chamber's point of view, Ahern was the logical choice to manage the project and speak for the Chamber. He was familiar with the Waterfront, and he had abetted the Boston Society of Architects the year before by setting the designers
A program to guide them in the idyllic sketch studies prepared for the Chamber's magazine.

Ahern's charge was relatively clear-cut— with Chamber funds scout the area, prove that it is ready for renewal, and develop a plan for the Waterfront. How he would do this and what his personal role in planning would be was undecided, except that Ahern did not fancy himself as anything more than the project's manager and should enlist the technical assistance necessary to carry it off. He knew that his employers favored this assistance in the form of outside consultants of some eminence, who would take over all the planning and design functions. It soon became apparent that Logue and the Chamber were of one mind on this matter. Logue was on the spot at the beginning of his tenure. Successful renewal in Boston required public confidence, and public confidence, as we noted earlier, required that men of experience and stature become involved in the Boston program. In fact, in professionalizing the program Logue engaged I. M. Pei of New York to develop the Downtown North GNRP (of which the Waterfront would be part), and we are told that he hoped Pei could do the Waterfront project plan for the Chamber in addition to the Government Center plan for him. By trusting to Pei, Logue could forget about the Waterfront from a design point of view. Ahern, being a realist, saw no reason why this arrangement shouldn't work. It certainly defined his own role quite well, for he would simply be responsible for liaison and coordination activities and like the others, could place great trust in Pei or an equivalent designer of status to do what was best in the Waterfront. The basic organizational problem, then, was all but resolved.

At about the same time that the pieces were falling neatly in place, Samuel Mintz was looking for a job. Mintz was a designer who had worked in the ateliers of several internationally prominent architects. He had the same energy and articulation that characterized Ahern, but was driven additionally by a deep sense of conviction on matters
of design. He was also anxious for design to become a more effective force in public
decision-making and believed its impotency was traceable in large part to a soft-spoken,
disinterested, and untracked architectural profession. Mintz was available for a shift in
his own career goals because of a weariness with what he called the "cardboard planning"
of the architectural world, especially among architects of prominence. At the end of 1960,
when the promise of an action program in Boston was in the air, Mintz looked about for a
niche in it, but no jobs under Logue would be open for at least five more months. A friend
at the Planning Board sent him to Ahern who, desirous of a technically-oriented assistant to
coordinate the consultants' work on a day-to-day basis and relieve him for more general
administrative duties, decided to hire the emphatic young man. On the first of January,
Mintz was in the employ of the Chamber.

His disaffection with well-known planning and design consultants prompted the outspoken
architect to think about other methods for structuring the process. As he and Ahern set about
the business of formalizing the Chamber's commitment to the City through the establishment
of a separate Waterfront Redevelopment Division, Mintz became more convinced that it
would be a mistake for the Chamber to cast its lot with outsiders, especially since in his
opinion local resources were just as competent, however less star-studded they might be.
Moreover, he and Ahern would likely remain weak and passive courtiers in the project unless
they could become active and responsible agents in the planning and design work. His idea
was to develop a small staff of designers who would do the bulk of the labor and to use the
best local talent available to help set the program, generate ideas, and act as critics and
reviewers of the output of the staff. Locally-based talent, he argued, is likely to have
better opportunity to become intimately acquainted with the project area, is probably more
sensitive to the peculiarities of Boston's social and political institutions, and would be much
more accessible and accountable than talent that flies into Boston periodically and then returns home to do the work. Mintz went further and started hunting for likely consultants, before he presented the idea to Ahern. He turned to Kevin Lynch and John Myer, both of whom taught at M.I.T. Lynch, the planner, had just published *Image of the City*, and the book indicated to Mintz that its author had developed an acumen for Boston and the potentials for its redesign that had to be a part of his scheme. Myer, the architect, was a thoughtful and articulate designer low on credentials in 1961, but high in the esteem of those with whom Mintz consulted about the choice. Both academics, who had also collaborated on early design studies for the Government Center under the old Planning Board, expressed interest in the Waterfront project. Mintz now broached the idea to Ahern who, after thinking about it and talking with other people in and out of the Chamber became "moderately convinced" that a Lynch-Myer-staff arrangement might improve on the initial arrangement.

The Chamber, for its part, could not make a decision, and turned to Logue. The administrator was upset at a shift in strategy. He did not know Lynch or Myer very well and certainly not Mintz, who must have appeared to Logue to be a parvenu. As far as Logue was concerned, he was not buying any status for the project by casting his lot with Mintz and his men. Eventually he was persuaded to endorse the arrangement, however, partly because it was the Chamber's money, and partly because he could exercise some control, albeit indirectly, through Pei's design suggestions in the GNRP, and through some limited staff work at the BRA. By the spring of 1961, Ahern and Mintz had picked up some junior staff, additional consultants on traffic and real estate, and had signed contracts with Lynch and Myer. The planning and design process could begin.
Mintz and his design cadre faced problem-solving under relatively loose and undefined circumstances at first. The waterfront area was considered a threat to the entire downtown because of continuing, unarrested decay. The design possibilities were enormous both in scope and variety. However, there were few directives, even implied ones, to guide the project. Valuable reuse opportunities were assumed to exist, but were not specified beforehand. Furthermore, the scale of permissible physical change was unknown, for political directives on clearance options were absent and would not develop for approximately six more months. While the Chamber team and its consultants could see the need for replanning, they lacked a real program for developing and correlating the information, criteria and design possibilities.

Nor would exchanges between designers and their social environment be useful in achieving ideas about problems and possibilities, for such interaction among participants as existed in the Spring of 1961 were beginning to vaporize. Prospects for new relationships were on the horizon but were still unknown qualities. Almost predictably, the Chamber of Commerce was receding into the background as a Client. It proffered some tentative ideas, but never seemed enthusiastic enough to orchestrate the process. Part of the difficulty, as we shall discuss later, was internal to the Chamber's organization. A Technical Advisory Committee, a logical substitute in terms of certain of the functions that a client can perform, never fulfilled its promise, and this was evident from the very beginning. Logue, for his part, also backed away from a concrete role in the design process, allegedly because he was interested in having the designers explore the problem on their own. Secondly, he was officially an outsider at this point. Private funds were being used to demonstrate the need for public action in the Waterfront and to prepare the basis for formal City application
for funds for an official survey and planning period during which, of course, Logue could exercise considerable influence and authority. Indeed, administrative jurisdiction for the project belonged entirely to Ahern, for the BRA did not appoint a project director until more than a year later.

Prospective participants were there, however, as were some roles in the process that had to be filled. Logue was never out of sight completely. As he would eventually assume control of the project and as the Chamber had all but abdicated the design team knew he would have to emerge as the Decision-Maker in the process sometime or other in this early work. Ahern was also potentially important, simply because his expanded responsibilities for the project as a whole would give him a bird's eye view and the obligation to provide information and set goals for the designers. He was initially preoccupied with a vast array of other concerns, including the problem of relocating portions of the wholesale market, and left the designers to their own devices at the outset. I. M. Pei also loomed as a prospective entrant into the Waterfront design process. Neighboring Government Center was a very active project and of extraordinary relevance to the Boston renewal effort, and Pei was also already at work on the Downtown North GNRP when Lynch and Myer signed their contracts. Through an association with Dreyfus Properties, a large land (and wharf) holder on the Waterfront, Pei could also be expected to expand his role in the project as time went on, although this was not known at the time. David Crane, about to become a special consultant to the BRA, was clearly interested in design problems throughout Boston including the Waterfront, and this interest would draw him into the process later, even if unwelcomed by the Chamber's team.

Other participants would have to be invited, for some critical specialist functions cropped up almost immediately. None of the designers presumed an expertise in the nuts
and bolts of building on or near the water. There were likely to be unforeseen problems, and some engineering advice was necessary as soon as possible. In addition to what could be done physically, the marketability of the area was an obvious consideration in whittling the plethora of reuse opportunities down to a meaningful and manageable aggregate of ideas. Yet, engaging an economic consultant at that time only meant that his involvement would not be felt for several months at least and, thus, the designers would have to study design possibilities partially into the process without the benefit of hard economic information. 5

Defining the Problem

The design process, then, was fairly well reduced to the interactions among the members of the design team itself, to Mintz, Lynch, Myer, and several staff men, whose task it was to determine what was appropriate to the Waterfront. The group was homogeneous to a point. Its members shared a strong sympathy for the visual aspects of the problem and the criteria that these implied. The designers emphasized the water side of the Central Artery (and that elevated strip itself), rather than the Faneuil Hall area, and a source of a great deal of the information was through simple visual encounters with that sub-area, though more objective evidence was enrolled in the effort, often, as in the case of historical data, to substantiate or correct visual impressions of the venerability of the many features scattered along the harbor's edge.

5 Charles Abrams was engaged for a very short period of time, primarily to conduct a brainstorming session on reuse potentials. In retrospect, several of the designers conclude that this was a valuable exercise though many ideas, such as moving Boston's Chinatown to the Waterfront, were more intriguing than practical. Altogether, he suggested 37 land use possibilities from housing to a health club in Boston's Waterfront: Some Ideas for Study, his report to the Chamber in 1961.
The Waterfront design process presents a peculiar case relative to the information component, a case perhaps more closely allied with new community design than with the process as we know it in urban renewal. It was not "clean slate" design, but we have noted that it was unclear at the beginning how smudged the board really was. It became essential to search for constraints in the existing forms and activities, and the tendency was to be somewhat conservative in evaluating the district. With physical forms the tendency at first was to include not only those that must remain from an obvious and practical point of view, such as recognized historic landmarks, and essential structures like the Transit Authority's Power Station next to Union Wharf and the huge Telephone Company Building across from Long Wharf, but also to be charitable toward structures like the Long Wharf and Rowe’s Wharf buildings which the designers held as important resources in rebuilding the visual quality of the district, despite generally delapidated conditions or poor tax yields. With activity, the tendency was to look to key trends, and to project therefrom. Of course, acting conservatively here resulted in exactly the opposite from a similar approach to forms, for the overall long range trend in certain waterfront activities would lead to their disappearance rather than their retention. The fishing fleet, for example, was declining and its slow demise was assumed to continue. Likewise, Atlantic Avenue was gradually becoming less important as a heavy service artery and the designers assumed it would, and should, phase out as part of the downtown trucking network.⁶ These assumptions opened many options, for the designers could now think about new kinds of trends in activity that they would want to encourage.

The team members, it seemed, agreed with minor exceptions on the general picture of

⁶ Interview with John Myer, April 11, 1968.
potential physical constraints on the problem. They split into two factions over the question of what should be done with this knowledge now that an approach to the problem would have to be defined. The consultants preferred to treat the constraints casually since, for the most part, they were internally generated and there was no guarantee that they were real-world obstacles. Lynch and Myer were anxious to explore the full potential of the Waterfront first, using design possibilities as a means for feeling out the problem unobstructed. They brought to the project a strong bent toward systematic analysis, a tendency toward making as many of their decisions as explicit as they could, to diagram and illustrate symbolically the means by which one proceeds from objectives to proposals through the conscious integration of the components of urban form. Lynch was deeply rooted in planning theory and had thought a lot about problems of urban form, especially as it related to patterns of human behavior. He made careful distinctions among the various scales at which environmental designing could be done, and was fresh from investigating the kinds of design considerations that might be relevant at the large city scale. Some of his research into the perception of urban form had just been published, in which he developed the idea of "imageability" was a design criterion of the city scale, and explored the potential of visual analysis according to principles of design that focused on perceptual characteristics of the city. The Boston downtown peninsula had been one of the foci of Lynch's research studies. While he made some attempts in his book to suggest the design consequences of building a legible and perceptually vivid form for the downtown area he did so in limited fashion, merely to illustrate the thesis that was central to his book. The Government Center

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was a singular opportunity for Lynch to explore his concepts, but his involvement with that project occurred while his theoretical investigations were in process. Now he had refined his ideas somewhat, and the Waterfront presented him a unique personal opportunity to square his research with a real case study. Thus, his motives in temporarily suspending the rules of the game can probably be traced as much to a genuine curiosity about the power of his thesis as a belief that the freedom to explore would really sharpen a feel for the problem.

Some designers on the staff brought with them to the process more orthodox inclinations. They picture Lynch and Myer as treating the Waterfront as an academic problem. This kind of exploration, it was reasoned, would not produce significantly better results, and much time would have been lost pursuing pies in the sky. The detractors could not appreciate a designing strategy that didn't commit itself to constraining factors or to whatever laws govern the development of workable schemes. Even the constraints of project costs, it seems, would be abandoned for far too long a period in the kind of utopian planning that the consultants wanted to do.

Mintz himself possessed a little of each point of view. He wanted a good design for the district even if unconventional means and unfamiliar criteria got him there. He was not process-oriented. However, as one interviewee observed, Mintz had to have certitude about the scheme and an assurance that ideas were reasonable enough to carry forward into implementation by the BRA. Since the M.I.T. consultants were hired at his instigation, however, he felt obliged to support them, and decided to trust Lynch and Myer to guide the process and set the tone for design. The original strategy was for the design possibilities to be explored by Mintz and the staff, with Myer serving as the key design consultant and Lynch entering the process at strategic points with ideas and criticisms. Because of
staff resistance to the approach the consultants were devising, the arrangement of tasks had to be modified as spring turned to summer and actual designing was beginning. A looser, less formal system developed as a result, one in which Myer (and his associate Stephen Carr) would assume a greater responsibility for actually doing designs and systematic analyses of problems and potentials. Thus, a larger force of people were actually assigned to equivalent tasks as designers.

Aside from differences in the scope of constraints, the Lynch-Myer approach to grand planning differed from Victor Gruen's approach in the CBD in at least two highly significant features. First, no prototypical design possibilities governed the shape that the Waterfront proposals would take. Like Gruen, the Waterfront consultants operated from a stockpile of general criteria or rules that should be employed in urban design, but drew up short of specifying their physical consequences. They emphasized instead the circumstances of the problem at hand, and viewed criteria not only as a guide to understanding the problem and producing a solution but also as a device that somehow had to be used in evaluating a range of possible solutions. Second, grand planning was temporary and of no intrinsic value. It could not, in the view of the Waterfront consultants, produce viable proposals unless it could be reconciled with problem constraints and the dynamics of the physical environment. It could only illuminate some of the difficulties of connecting form with objectives, of clarifying issues. For Gruen, however, the grand plan was his distinctive stamp. He was associated with it and, to dilute the product beyond a certain point was to remove his imprint from the project, and all that went with it. The Lynch-Myer imprint would not be in product, but in process. There were few design possibilities to be bartered and no reputations to be used as a medium of exchange. These differences seem to have been a factor in shaping the mechanisms for decision-making in the Waterfront project, for the
bargaining situation that we noted in the CBD design process between Gruen and other participants did not really materialize in the early days of Waterfront-Faneuil Hall design process. The design developed out of different circumstances, as we shall see.

Although Mintz endeavored from the outset to collect data about the area, often in concert with I. M. Pei’s GNRP staff, the early designs for the Waterfront grew out of simple visual evidence and historical records to a very large extent. According to Mintz, Lynch set the initial guidelines at very broad levels: the team should study overall land masses and water masses, to seek logical ways of differentiating and structuring these most fundamental physical elements in the design problem. John Myer recalls that the most elementary of visual surveys indicated --to him at least-- that some real design problems existed at the cotterpin of the area, the point of relation of land to water. "When you arrive in the Waterfront on T Wharf," he observed, "you simply don't know where the sea is." While it is true that water is everywhere in sight, it is generally formless, a large, wet ambiguity giving no visual clue of which of its openings actually lead to open ocean and which lead to the backwater around the ironing-board landscape of the airport or the chaos on the banks of the Mystic River. If a new Waterfront were to serve as any "window on the world," then that world had better be located. Indeed, in Myer's view, the slogan went beyond Chamber poetics, to focus on what it could really mean to the user of the Waterfront. A Visual orientation to the sea was probably a singular contribution that a new design could make to give the observer some means of clarifying the otherwise complex assortment of islands, peninsulas, and shorefront uses that mark the labyrinthine Boston harbor.

9 Interview, April 11, 1968.
Achieving a clear and vivid connection to the sea became a concern for Myer and Carr that summer. This was not always so easily understood by other team members as another problem that plagued the group: making explicit the connection of the rest of downtown to the water through this part of the Waterfront. This was the more obvious problem, the one conventionally assumed as paramount. The Central Artery was visually dominant from a great many inboard vantage points in the downtown area. Further, the streets that led to the water never seemed to penetrate; if the Artery superstructure didn't stop them, then, buildings that hugged the elevated highway served as barriers to visual continuity.

The consultants apparently saw the obvious problem as the manageable one. State Street to Long Wharf offered satisfactory opportunity for making the primary tie, if nothing better were feasible, and if continuity under the steel frame of the elevated roadway could be achieved. The more challenging problem was the former and, in the sketches and diagrams that marked a summer of casual, expressive study, the emphasis on the broader land-water relationships is evident.

The design consultants prepared numerous studies at that time. Scant attention was given to project boundaries, which weren't that permanent anyway. The team took a very large area into consideration in the face of a problem where the issues were unclear and where the designers were uncertain as to what they could deal with effectively. His object, according to Myer, was to cover the broadest possible range of solutions to the broadest problem considerations.

In examining probable approaches to the land-water problems, two possibilities emerged: was it possible to clarify and differentiate the bodies of water from one another, especially

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10 We are particularly indebted to Professor Myer for his assistance in preparing this chronicle of the initial stage of the Waterfront design process.
the distinction between the inner harbor to the north and the sea channel leading in an
easterly direction to the outer harbor and the sea? Relatedly, was it possible to strengthen
the image of downtown Boston as a peninsula, with this stretch of waterfront acting more
forcefully as the promontory? The former presented particular difficulties because of the
impossibility of exercising direct control, so to speak, over the water. One harbor could
not be dyed blue and another red, and a third green. The team could not expect Logue to
consider seriously the construction of a "water gate, New England buddhist style" in the
harbor, a suggestion on an early sketch as a means of marking the primary view. The design
here would have to control the visual connections and lines of sight from the land instead,
giving the seaward visual connections and lines of sight from the land instead, giving the
seaward visual direction clear dominance in the form, use, and orientation of the harborside
land areas. At first, the designers felt that this would have to be done along a land edge
whose map profile relative to the land it restrained would have to be more convex than the
existing contour of the waterfront, on the premise that a convex land shape in a body of
water would let the land dominate the water at the large scale at the point of contact. It
followed, then, that the core peninsula would best be reinforced by achieving such an edge
to its mass. But the problem was that the peninsula is more fiction than fact to begin with.
In any dramatic sense it does not exist. Even on a map it is difficult to see it this way.
The Charles River, the core's northern and western edge, is a discontinuous body of water.
The basin of the river separating Back Bay from M.I.T. stops abruptly at the dam and the
Science Museum that straddles it, giving the basin the appearance of a lagoon rather than
a continuation of a river to the sea. On the other side of the dam, the connection of the
river to the inner harbor is almost completely obscured by the many low and high level
bridges connecting Boston to the north. On the core's southern and eastern edge is the
FIGURE II. -- PHYSICAL PROBLEMS IN THE WATERFRONT AREA
Fort Point Channel, likewise a weak water barrier, to be made weaker, the designers discovered, by a partial filling-in of it in the South End. Thus, manipulating the edge of the Waterfront, the designers soon realized, may not make any significant change in the conception of the peninsula, for the real edge problems were elsewhere, just beyond their reach.

Alternatively, concave land masses emphasize the water which they embrace and the views beyond. While some of the early sketches show attempts to render the edge convex with a singular cove-like indentation at the foot of State Street near Long Wharf, reminiscent of the configuration in the early days of Boston, the efforts look contrived. With the idea of reinforcing the peninsula dropping from consideration as a design goal, more opportunities opened for manipulating the edge to better cement its seaward relation. A variety of sketches ensued, exploring coves and harbors in various combinations all along Atlantic Avenue. Primarily, however, the emphasis was on the Long Wharf site, between Central and Commercial Wharves. It was here that the designers wanted the junction of city and sea to have its focus.

The design possibilities in the Long Wharf sub-area were enormous, but exploring them helped, it seems, to clarify the related waterside possibilities both north and south. Other broadly-conceived functional sub-areas began to evolve, as the entire district --"a piece of land in search of activities"-- was thought of as having two predominant land uses, housing and regional recreation facilities. Entertainment, commercial, and tourist activities were programmed early to surround the major cove. Housing --and a broad range of incomes was thought desirable-- could string out along the other wharves, and small marinas and

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\[1\] For the most accessible compendium of maps of the Waterfront showing its historical transformations see Whitehill, *Boston: A Topographical History* (Belknap Press, 1963).
ancillary "neighborhood" services attendant to the housing would be programmed as necessary.

At the northern end of the strip was the Coast Guard Station, a working facility that defines both the end of the waterfront and the terminus of Hanover Street, the main strip along which North End life effervesces in the great Mediterranean tradition. A comparable definition was sought for the southern tip of the project area, and, although the final 1964 plan fails to provide it, early criteria did to some extent suggest "working" water-oriented facilities, such as boat building and repair areas. Office uses were also considered.

Three other considerations, never really forgotten, came to play a role in shaping the design further. In fact, as the design process progressed, these would in themselves develop into more fundamental issues than the almost monistic ends they were originally supposed to serve, the dual link of city to water edge, and edge to the seaward direction.

The first consideration was land, or, more precisely, the lack of it. Creating any sort of cove required some land out of which it might be carved. The alternatives were to extend the existing wharves and fill in between them to form a solid perimeter around an area from which other wharves would be cleared, or to fashion a concavity out of the existing land mass abutting the water. Actually a combination of the two seemed best, for creating additional land near the water would permit intensifying building in direct contact with the sea around the cove, while hollowing out some land would actually bring the cove closer to downtown itself. The obstacle was Atlantic Avenue, which backed up tightly to the strip of wharves along the entire Waterfront. This effectively killed any opportunities to cut the cove into the peninsula and to get any land at its foot in direct physical contact with water. If the road could be realigned it would permit reforming the land contours and give room to play on the seaward side of the project. Early schemes studied the possibilities, including radical ones like the burying the avenue from Fleet Street aside the North End to
Milk Street beyond the Customs House Tower. Soon, however, a realignment at grade was thought most feasible, and from that point on, schemes issuing from the Chamber office included the commitment to a new Atlantic Avenue.

The second consideration was the Central Artery. Since it was perhaps the most permanent of the "sacred cows"—even Faneuil Hall could probably be moved, if the benefits could be demonstrated—it was decided to think positively about it, to view the superstructure as a portico to the Waterfront. The problem was to achieve pedestrian continuity under it, which meant contending with the trucks, traffic, and parked cars lodged in the cavernous underarea. The State Street connection was paramount, but other points of entry were also of concern.

While the Artery was to remain, the designers found that they could not develop the major pedestrian connections unless certain ramps could be changed, a recommendation quite outside the city's power to implement. Here again, Boston's capacity to act was limited. Yet the consultants felt so strongly about the goals that, by the Fall, they had adopted an extreme policy which called for

abolishing all movement under the Artery, allowing spaces and buildings to be continuous, and [taking] all ramps from the zone where we want to make connections, keeping the overhead narrow and without anything to obstruct vision except the pillars....12

The difficulties of developing an alternative truck route, of restocking the parking supply, and of rebuilding the ramps elsewhere were readily apparent to the designers, and the search for acceptable solutions would occupy considerable time in later months. The designers felt no constraints on their capacity to plan.

The final concern that set the direction of the plan in its early stage was the climate at the Waterfront. The wind off the water was cool and wet on those occasions when it came

from that direction, and could be bonechilling at times. Even the prevailing westerlies could
develop into uncomfortable breezes, especially in the winter. Wave action in the unprotected
harbor was a problem at times for small boats. Shelter, for people and their watercraft, was
a valued commodity in this area and began affecting the design of the coves and inlets.
Direct sunlight was a help on cool days but, as the designs developed, it became increasingly
difficult to insure it at key places in the Waterfront, once certain decisions on the relations
of forms and of activities were made based on other critical design criteria.

The consultants' tinkering with the Atlantic Avenue alignment and with the traffic flow
beneath the Artery met resistance almost from the outset, from both outside and from within
the tight little team of designers. The opposition was not so ferocious in this embryonic
stage of the design work as it would become in time but, nevertheless, the roots of the later
blooming discontent were beginning to take hold. Actually, the major external problem
came from other people's efforts at making improvements in another project, the nearby
Government Center. In concert with that development, Logue's transportation consultants
proposed early in that summer that traffic around the huge complex of public and semi-
public buildings be assigned not just to the area's immediate border streets, Cambridge and
Congress, but to the underartery and Atlantic Avenue as well. With some changes in the
road connections north and south of this portion of the regional core, the four concentric
corridors of traffic so created would constitute the basic system for moving vehicles around
and through the downtown of the city. This proposal obviously could damage attempts at
eliminating the underartery traffic and would reduce considerably the possibilities of changing
the alignment of the Waterfront's main street, for something other than a straight road might
be regarded as an impediment to a smooth flow of the anticipated heavy volumes there.

For his part, Logue was more concerned about making Government Center work, and favored
the "four corridor" scheme as a result. Relatively early in the process, then, outside factors were threatening to take the existing street system of the Waterfront out of the control of the urban designers, a far cry from the presumptions under which the Chamber's team began its work.

**Islands, Pools, and the Shape of Design Possibilities**

As a constraint, the proposed new Government Center circulation plan did not automatically rule out the alternative Waterfront concept. There was no pressure on Logue for a decision at that time. It seems to have been influential, however, in giving Logue and the BRA exposure to additional Waterfront design possibilities that were not forthcoming from the formally constituted Waterfront design process. Internally, a number of optional schemes were being generated, but this activity tended to accept the general notion that much of the circulation system was a variable rather than a parameter. The schemes came out of rather independent designs. One such proposal was known as the "Island" scheme, in which islands were created in the Long Wharf sub-area, similar to the sketch in Figure 12.

Aside from this, Myer generated a "Shallow Pool" scheme, calling for some realignment of Atlantic Avenue to permit a small cove to form in the Long Wharf sub-area. A third alternative took the designers' fancy. It presented an extreme set of design possibilities in which the cove concept was maximized, by creating a "Deep Pool" at the foot of State Street. The shore line around the cove was pushed back almost to the Artery, thus (in one version, anyway) cutting off Atlantic Avenue completely as a through-traffic carrier. The head of the cove was extended seaward, well beyond the existing pierhead line, by the construction of a new pier that partially encircled and protected an inlet. On this embracing arm would be placed the special uses and activities that were appropriate to the focal point
FIGURE 12. -- VERSIONS OF THE THREE ORIGINAL DESIGN CONCEPTS

ISLAND

DEEP POOL

SHALLOW POOL

(not to scale)
of the Waterfront.

Of the many design possibilities studied that Summer, these three were regarded by the
design team as the most promising, given the criteria that had evolved up to that point.
Each scheme demanded a dramatic focus at the key point on the Waterfront, and required
the removal of Long Wharf and most of its neighboring projections into the harbor in order
to achieve it. Each fussed over the micro-climate problem, with greater or lesser success.
The trio of alternatives made stabs at the underartery enigma. Parking began to emerge as
the kind of use that might huddle against the elevated structure, rather than nestle beneath it. If placed correctly, new garages could serve double duty, by responding to the needs of
the downtown commercial core on weekdays while providing for the leisure-time activity
in the Long Wharf sub-area during evenings and weekends.

These schemes were bold. They reflected a set of design criteria priorities which
permitted them to be strong. To put it another way, they ignored (or ranked low) criteria
concerning existing conditions that would have diminished the area over which effective
control could have been executed. The major constraints under which the designers operated
were limited to a few intrinsic features of the existing environment: the Central Artery was
immutable (though its access ramps were not presumed sacred); Boston's North End Sanctuary
was inviolate; and a small handful of obviously important and distinctive existing structures
--the Custom House Tower is the leading example-- were out of bounds too.

What these schemes do not reflect was a growing concern among the designers about
whether they were really working toward the kind of feasible and product that they saw as
their initial aim. By employing their own chosen values as guides to ranking the criteria
could any of these three alternatives really be implemented? Were there other existing
features of the project area that would require retention? While historical, functional,
and architectural limits on redevelopment could be discerned relatively easily by the team in its current isolated operating state, were there political consequences to the alternatives that would have to be reckoned with? Would relocation be a problem, both technically and politically? Was rehabilitation economically feasible? How much could be spent overall on urban renewal in the Waterfront? And could the implementation be staged and coordinated? The designers were in an inadequate position to deal with these questions. Tackling such concerns was very much a matter for other participants in the process, and not many passersby had entered Ahern's design shop yet. Moreover, many concerns tended to be of the kind that couldn't be answered in any general way, but would have to emerge from specific reactions by specific people to the content of specific design proposals.

The design strategy in the face of these uncertainties was certainly a fearless and uncompromising one, as the boldness of the plans indicate. But it was reasonable to act this way if in fact design possibilities had to be used to exort criteria and constraints. Gruen proceeded in an equivalent manner at the beginning of the CBD design process. It was a necessary first step in the Waterfront design development.13

The rivalry between staff and consultants contributed to the strategy, especially reflected in the distinctly different character of each alternative, despite a general consensus of criteria. Enough ideas abounded in the group that could not be reconciled internally. Thus many more ideas left the drawing board for outside reaction than might have if such interchange with the social environment were more continuous throughout the first several months.

13 We do not want to leave the reader with the impression that the designers worked in total isolation. Mintz reports several meetings with Logue during the summer at which time the direction in which the designs were moving was discussed. However, there was little actual comment by the BRA administrator to cause Mintz to want to alter the course of design activity (Interview, May 1, 1968).
of work. Myer's "Shallow Pool," for example, was not a particular favorite among his mates, but he was encouraged to develop it more fully, nevertheless, and eventually got it reconsidered. It was through the activities of other participants that these three alternatives were whittled away one by one.

The "Island" alternative was reviewed by the real estate consultant and rejected by him from a market point of view, but this does not seem to have been regarded dourly by the team. It was internally the least popular of the three plans. Two alternatives remained, until Logue was invited back into the design process.

The Dawn of Dialogue: Enter the Decision-Maker

The Chamber's designers presented their alternatives to Logue in November of 1961. There are several opinions that prevail as to why the renewal chief reacted as he did, but his critique itself left our interviewees little opportunity but to report almost identical versions of it, so unmistakable was his refutation of four months' design effort on the Waterfront. In essence Logue was very upset at the amount of physical change being proposed and accused the designers of "making another West End" out of the Waterfront. He reacted neutrally to the ends that such large-scale redevelopment would serve, that is, the quality and worth of the redesign possibilities was a relatively minor point for him.

As a result, he saw little justification for the amount of clearance proposed, both of

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14 Additionally we rely here on Ahern's Minutes of the Presentation of Proposed Schemes to Ed Logue, Boston Development Administrator, November 30, 1961.
buildings and of wharves.\textsuperscript{15} He considered this an "irresponsible" renewal strategy for the area, and advised the designers that, henceforth, they should stress rehabilitation, with at least one-half the area's buildings handled in this manner. Logue also felt that the wharves themselves were existing resources, and while he preferred the "shallow pool" scheme of the two, he found unacceptable the fact that both schemes relied for their success on clearing the central portion of the area (the Long Wharf sub-area), piers and all. "New" environments, it seems, were not the order of the day.

Logue's motives were probably very complex, moreso than his official reasons indicate. Government Center was becoming a rocky road for the BRA to traverse. At least as many issues revolved around what was being wrecked as what was being built. The political cost of that project was steadily mounting, and Logue was becoming increasingly sensitive to criticism from camps, like the historians, that believed that urban renewal in the older parts of Boston could and should be characterized by milder forms of treatment. The means as much as the ends of renewal were now matters for the public interest in Boston. Lynch's view of Logue's attitude toward the Waterfront sums up the general impressions of interviewees fairly well: as a project on the heels of the West End and Government Center, it was time for the BRA and the city to adopt a strategy for action with relatively little political cost, and the greater the amount of rehabilitation the less the number of unmanageable issues.\textsuperscript{16}

\textsuperscript{15} There were some objections raised by the team to this, and they led Logue and Mintz to take a stroll through the project area shortly thereafter. Building by building they discussed problems and potentials for rehabilitation. Eventually, an informal set of priorities developed for the existing Waterfront, but even this would be shaken by the independent moves of owners and developers that would appear later in the process.

\textsuperscript{16} Interview with Kevin Lynch, May 6, 1968.
As we have observed, the meeting with Logue, while an immediate setback, was somewhat predictable in light of the strategy used in the uncertain atmosphere of that summer. Logue brought with him to the process much of the information that was lacking earlier. He laid down some real constraints on problem-solving, and more than one member of the team welcomed the intrusion. The program was no longer subordinate to the design. For this to happen, it was necessary for some design possibilities to be presented for review, for the purpose of gaining information and criteria at that time. How much of the "pool" schemes could be salvaged would depend now on a review of the problem by the design team.17

The City, of course, could not really review any kind of urban renewal plan without keeping one eye on the project costs of executing it. Dollars were important to Boston, and among the ways Logue looked at project economics was a simple cost-benefit evaluation of redevelopment. In 1960 only through the BRA did Boston stand any opportunity to increase its taxable property base, and the lower the cost of doing this the more dramatic the gain would appear. Government Center, by and large, would show a poor ratio, for the major new edifices would be tax exempt. Waterfront-Faneuil Hall, on the other hand, looked like a more promising recaptured resource. And by 1961, in cities like Boston where renewal techniques were rapidly maturing, there was no reason that projects had to cost cash anyway, given the system of credits for public improvements devised by the Federal government, and cleverly applied by many local public agencies.

No estimates exist of what the "pool" schemes would have returned to the city in added

17 Further, Myer recalls, it was becoming evident that perhaps only a limited number of activities really wanted a Waterfront location after all, thus making the market for land --new or cleared-- somewhat doubtful in the Fall of 1961. (From a lecture at M.I.T., April 22, 1968).
taxable property, but it appears that their respective ratios were disconcerting. Engineering estimates placed the cost of each scheme at between 23 million and 27 million dollars, and set the reuse value at less than 9 million dollars. Almost literally, then, a lot of money was being poured into the water to achieve the new window on the world. Logue, we are told, was as upset with the fiscal consequences of the designs as he was with the political ones that centered on clearance and rehabilitation, and the designers knew it. The cost arguments were particularly compelling. Both schemes still depended on considerable revamping of the Waterfront's profile, despite being modifications of the earlier, even bolder, concepts for shaping the land-water fit. Technically, this required rebuilding of bulkheads to create artificially the water shapes desired in the schemes. The engineering information—which became available at approximately the time of the meeting with Logue—advised the designers that new bulkheading would cost approximately $1,000 per lineal foot to put in place. Thus, depending on the scheme, this meant that anywhere between two million and five million dollars of the total engineering estimate was for bulkhead construction, not counting preparation of new pier areas for development. Logue would have none of it, and the designers weren't altogether sure they would either.

Both "pool" schemes were unalterably jeopardized by the twin constraints so suddenly thrust upon the designers. The "shallow pool" concept was, of course, highly difficult if not impossible to develop because it depended exclusively on removing wharves and buildings in the heart of the area to pave the way for redevelopment. Whatever hopes the designers might have had for accommodating Logue via the "deep pool" scheme—that is, by retaining existing buildings for Logue at the same time that new land was created for the new development that the designers desired—were dashed by the improbability of building out beyond the existing bulkhead line, given the infrangible cost constraint.
Retrenching

Kevin Lynch seems to have drawn from his experience in the Waterfront design process when, several years later, he wrote:

One difficulty encountered in generating alternatives is well known to the designer. The search for possibilities is arduous and when one is found and elaborated, its creator has made a large personal investment in it. Having succeeded once, he is committed to his success and is unwilling to try again. Often he will believe that any other workable plan is impossible, and attack it if it is presented. This effect is particularly sharp in complex design....

It is no simple matter for urban designers to void previous work and begin afresh. The "pool" concept, especially the "deep pool" alternative, almost seems to have become apotheosized within the close confines of the design team despite some internal conflicts. It was basically the right concept, purely as a design solution, and it would not vaporize easily even under the external pressures beginning to operate against it. The design problem now became this: is any semblance of the concept salvagable? What stand would have to be taken to satisfy the designers?

Put another way, the designers had the area they could effectively control cut out from under them, if they abided strictly by the new ground rules established in the Fall of 1961. If restoring the Waterfront to a previous level of importance in Boston was both the aim of the designers and of other participants in the process, then these groups were clearly at odds over an operational definition of this objective and of the way by which the effectiveness of design possibilities should be measured. The designers were working under broader aspirations, grounded, it seems, in a more careful and complete reading of the project area's

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history. One can conclude that the City had a much more modest impression of what would be necessary to effect sufficient restoration; recapturing the spirit of the Waterfront at the turn of this century would be just as good as expressing its essence at the turn of the last. It would be cheaper, too, as rehabilitation rather than physical reformation would be the crucial strategy.

Under Logue's edict, the wharves would remain and be rehabilitated. Existing buildings like the Quincy Cold Storage building and the Old Customs House at the end of Long Wharf were not to be considered as remaining, and such decisions made it difficult to salvage a cove-like atmosphere at the edge of the harbor. However, the edict implied a degree of reasonableness. The BRA's position on existing forms along the Waterfront was tempered by the feasibility of rehabilitation, and it appeared to Mintz that if the designers could demonstrate on economic grounds that building or foundation conditions were such to negate rehabilitation in certain areas, these areas could be made available for redesign. This was a perfectly reasonable strategy from the viewpoints of designers, clients and property owners. It gave everyone a way out through solid, quantitative justification for design decisions.

From the viewpoint of local historians, however, it was pernicious to cast the City's heritage in the bearish light of building economics. It was not a question of what could be saved by a reasonable investment, but, rather, what must be preserved at any cost. Thus, Logue was placed in an awkward position between potentially conflicting criteria. Moreover, an amelioration hardly seemed possible at the level of general policy; it seemed likely that each separate taking would have to be evaluated on its own merits in striking the delicate

\[19\] Note, for example, the extended pier in the deep pool scheme. Though crooked and embracing the cove, it does bring memories of Boston's original deep pool, the Town Cove, and the era when Long Wharf was indeed a very long wharf.
balance.

The Nature of Conflict: The Case of T Wharf

One excellent example is in order. Among the most serious of isolated issues was related to the fate of T Wharf. A nub on the north flank of Long Wharf which actually gives that pier two projections seaward like giant tines on a stubby fork, T Wharf actually has a history antedating most of the existing Waterfront, including Long Wharf itself. What remains today is part of the crossbar of the T, with the stem now incorporated in the body of Long Wharf. That bar was originally part of a peculiar stone sea wall, sometimes called the Barricado, that was built for defensive purposes between 1673 and 1680. The Barricado was parallel to the original shore line of the peninsula but some distance out, and ran from the site of Rowe's Wharf north to where Lewis Wharf currently stands, coincident today with the existing shore line. It was never needed for defense and gradually fell into disuse and began to disintegrate in a relatively short period of years. Soon all that was left of the line was a series of isolated little wharves, artificial islands in the harbor. When Long Wharf was built about forty years later, it grazed one of these islands and assumed it like an appendix. Out of this grew T Wharf which was at first as recognizable as the name implies, but, through the years merged bit by bit with the larger Long Wharf until its name became only a clue to a wharf that once was.

As it grew and coalesced with its neighbor, T Wharf still managed to maintain a rather individual appearance, as a collection of small quaint waterside buildings with distinctive coloring emerged to become housing until present times. The look of the wharf is ramshackle, but remains a point of reference in the plethora of assaults of the land on the sea that so remarkably shaped both the form and content of today's Boston. It has
real value in the historical scene. 20

On the other hand, T Wharf was almost literally falling into the water in 1962.
Rehabilitation of the pier and the buildings would have been an expensive proposition, and there was no indication of enthusiasm by its owners for accepting the challenge. Indeed, it was becoming clear that the owners would scuttle the wharf shortly.

The designers were very quick to note that the removal of T Wharf would be fortuitous. With little effort the cove concept could be resurrected, albeit abridged, between Long Wharf and Commercial Wharf if T Wharf disappeared. This represented progress of some sort to the designers. In terms of the design process, it represented a shift in thinking. Originally, the cove was as much a means for achieving a seaward orientation as one arrived at the foot of State Street as it was an end in itself. Now, simply achieving a pool was challenge enough, let alone maximizing its role in a new Waterfront. Its intrinsic value took on major import, and the interest in making the kinds of clear visual connections seaward that underscored so much of the design effort of the previous summer receded into the background for most of the Chamber of Commerce’s designers. These connections would be handled, they hoped, some other way at some later time in the process.

When faced with choosing a course of action on T Wharf Logue was confronted by a very strong plea from Mintz and his staff, so strong, according to Mintz, that it bordered on an ultimatum. 21 Those Custodians of the Waterfront, the historians, pressed for retention of the dilapidated pier. Led by their vigorous dean, Walter Muir Whitehill, they hit Logue


21 Interview with Mr. Mintz, May 1, 1968.
from the other side with strident pleas that he persuade T Wharf's owners to restore it. Logue, however, was in a different position in this case than in his confrontations with Custodians in the Government Center project. For one thing, he had cost considerations on his side in the matter of T Wharf. The historians had little firm ground on which to take a stance this time because Logue could publicly justify the removal of the wharf much easier than he could its retention. Further, there were other means available in the Waterfront area for him to demonstrate his affection for history without having to spend as much money. Finally, Logue had managed by now to alienate his designers on enough counts to possibly jeopardize his relationship with them and the Chamber, and the Chamber was much more important to the Waterfront at that time than any other participants in the process. He could afford a concession to design on this issue. In doing so, a critical step was taken in finding a moderate course between the designers' boldness and the client's timidity; a "modified finger plan", as it came to be called, would now develop.

A case narrative, while it can provide a detailed account of the process by which a design is consummated, can very easily distort the time and human effort that such a process requires. Months of work can be compressed into a paragraph or two, yet momentary events and quick decisions can be expanded into pages. Uneven reportage sometimes results from quantitatively different amounts of information about the events in a process, though the reporter is obliged to do what he can to overcome this or at least to inform his readers of any gaps in his data. More often, however, it is the emphasis of a case --the reason for doing it at all-- that conditions the weight attached to any one event relative to another, and it is the narrator's obligation to remind his readers that he documents a biased view of a real situation rather than a description of all of the actual events. Therefore, we remind the reader that it is our impression the T Wharf decision emerges as a particularly important
one in the period between the Fall of 1961 and the Spring of 1962, because removing the crumbling wharf and its buildings was a giant step toward reorienting the designing to the course originally charted by the Chamber's team.

The Plan of June 1962

However, it was but one event in that time period. The "modified finger scheme" presented to the Boston leadership massed at the Sheraton Hotel in June of 1962 required the designers to address a host of separate problems all along the length of the Waterfront in order to produce that plan as we describe it below. In this present account, the time and effort are glossed over considerably. Partially, it is true, it is a problem of information—it is often difficult to unscramble the interplay among the elements of urban design for each and every one of the design decisions. But it is also a question of analytical emphasis. The informational gap could have bridged further if what we would have added to the case made a difference in terms of the purposes of this narration. At best the activities of the Mintz team in that period would have served to strengthen the assertion that, indeed, complex designing involves a great cross-fertilization of ideas in order for a satisfactory product to emerge, but this, if not intuitively obvious, can be illustrated in more dramatic ways or at least with less effort. One point of general interest about the Waterfront project, that is, what a study of this particular design process contributes to our knowledge of how urban designs are made should already be apparent, if only from the confrontation with Logue. Critical, parametric moves in the direction of a final plan often resulted from the interface between the designer (in this case a team of like-minded designers) and the immediate social environment, that environment being defined as participants entering the process with some degree of control over information, criteria, and designs.
By and large, the design activities of late 1961 and early 1962 were internalized. The design team, for the second time, withdrew to study possibilities for the project area. The process had moved, as it were, full cycle. This time, however, a program of information and criteria was present. In many respects, designing took on traditionally-conceived characteristics, as the designers played a fixed role in the process that for a time revolved tightly around a limited set of functions. Yet despite a period of conventional plan refinement, where the designers digested the inputs relatively free from external factors and proceeded perhaps as routinely toward a product as could have been hoped for, that plan almost didn't see the light of day.

By the middle of Spring, in anticipation of a deadline in June, the design team had just about concretized its Waterfront-Faneuil Hall proposals. The major effort on the drawing board still centered on the outboard side of the Central Artery, although Ahern and others had put considerable energies into the problems of relocating the wholesale market, and gave considerable thought to rehabilitation of the venerable structures in the market district behind the recently face-lifted Faneuil Hall.

Refining the plan meant, first of all, refining the concept of shifting Atlantic Avenue inland around the Long Wharf sub-area. The subtle, serpentined undulation in the road's alignment that was initially proposed gradually surrendered to a more vivid statement of the interruption in the straightforward driving trip around the tip of Boston. Entering the project area from the north along Atlantic Avenue the driver would proceed on the old alignment (much more comfortably, however, for it would be resurfaced and the tracks of the Union Freight Railroad would be gone), past new and refurbished housing both right and left to a point at the foot of Commercial Wharf. Beyond a small restaurant he would see the cove against the backdrop of Long Wharf and of some new apartment towers in the distance.
Suddenly, Atlantic Avenue bends away from the sea at almost a forty-five degree angle, and a new view appears. Now the driver heads directly toward the Custom House Tower, paramount in a downtown skyline. To his left as he slants inland is the cove, now separated from him by an open quasi-recreational space that he might eventually learn the designers have christened the Barricado as, indeed, it is approximately at the location of that old sea wall. But he will probably rivet his gaze on the old Tower, though as he gets nearer the green-painted superstructure of the Artery and one or two new commercial and parking structures on his side of it will dominate his view. The Artery cuts in toward him from over his right shoulder, seemingly on a collision course. But before he can pass under it in quest of the base of the Custom House Tower a block further inland, Atlantic Avenue turns to the left and suddenly, he is driving parallel to, aside, and below his counterparts on the expressway.

The character of the avenue changes with this change in direction. The wharves and the water are now several hundred feet eastward, to be glimpsed only periodically for the next thirty seconds of the trip, and not without some effort. The spacious feeling that may have existed in passing by the Barricado dissipates; as the road crosses State Street and Milk Street, the new buildings on either side echoing the massing of the old Telephone building and maximizing the use of land surface bring the impression of "downtown" to this section of the Waterfront. For a thousand feet or so, the driver defers to the pedestrian, because the new land opened on the eastern side of Atlantic Avenue is primarily dedicated to the people bound on foot for the offices, hotel, aquarium, excursion and pleasure boats, apartments, and harborside resting areas that have replaced the vacant lofts, scattered parking and ramshackle fish houses that now inhabit Long and Central Wharves.

If the driver wishes to disembark and join the activity, he may park in those structures
tethered to the expressway. If he drives on, he crosses India Street and, as the road once again bends seaward at a perceptibly noticeable angle, he leaves "downtown" about as quickly as he entered it, skimming along the side of the water-oriented uses proposed for India Wharf, including a yacht club and the project area's single large marina. Ahead would be a cluster of apartment towers where now Rowe's Wharf harbors parked cars, these towers symbolically indicating the southern boundary of the project. Atlantic Avenue turns south again at this point, but is now realigned on the harborside of the Old Appraisers Building as an embankment road, rather than sandwiched between that building and the Central Artery. Soon it joins Dorchester Avenue as the latter hugs the bank of Fort Point Channel, going south into older residential and industrial areas of the city.

The plan transformed Atlantic Avenue from a workhorse road into a visual experience. Where possible, the designers sited new buildings with the view from the road as a critical objective. Likewise, as in the case of the Custom House Tower, the road alignment was adjusted to provide orientation in both directions with well-known existing landmarks in the area. The realignment, then, served two purposes: more land could be opened for development directly on the water and a more vivid driving experience could be achieved. The former objective was, of course, the one which would see use in selling the concept to the public, but the latter was no doubt just as important to the visually-oriented urban designers who achieved it.

The wharves, naturally enough, became centers of the new development proposals despite program constraints. Both ends of the project's shoreline were defined by high-rise apartment tower complexes, like mullions framing the new window on the world. These developments--on the north arm of Union Wharf and on Rowe's Wharf--were for high income patronage and could, it was felt, develop into viable high density sub-environments in relative
FIGURE 13. -- THE DESIGN FOR THE WATERFRONT, JUNE 1962
isolation from the rest of the area. Housing was also the prime input into wharves other than Long, Central, and India. On Union Wharf, the old granite building remained, but the designers replaced the Transit Authority's power station with garden apartments. In general each of the other wharves—Sargents, Lewis, and Commercial—received similar treatment, and this tended to integrate the separate wharves into one environment. The major structures in the middle of each were proposed for rehabilitation into apartments, with new town houses and garden apartments ringing the perimeters. Some of the new dwelling units were positioned at the heads of the wharves, where silt deposits formed the basis for filling, extending and shaping the bulkheads slightly. The designers kept this new housing low, to avoid visually cutting the existing rise of the North End from a tie with the water.

The plan increased the North End's own housing supply, too. As scattered produce firms could be relocated, it encouraged land assembly on the slope of the hill west of Atlantic Avenue for moderate income housing (something never achieved on the wharves, incidentally). Very little was salvaged between the wharves and North Street in an effort to meet a projected housing demand that was felt to come from North Enders themselves. 

The Long Wharf sub-area, the heart of the revitalization, underwent major surgery, as the designers sought once again to strike a balance between dollars and design. The plan removed T Wharf, of course. The Old Custom House block, a three story granite building on Long Wharf that the designers had initially determined must be sacrificed in plans for reshaping the wharf, was now retained (in fact, rehabilitation of the upper floors into apartments was now beginning). Although existing bulkhead lines were consciously adhered

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22 A housing market is difficult to estimate at the micro-scale, and this was precisely the problem here. The planners believed that a potential was demonstrated by suburban-bound North End residents, and that many would stay in town if new housing near the old neighborhood were made available. But the estimates were little more than guesswork. Eventually the program was scaled down considerably.
to this time as much as possible, the designers discovered that Long Wharf by itself,
especially with the existing Customs House block retained, provided insufficient area
for the range of activities that was appropriate to the new focus of the Waterfront. Central
Wharf immediately to the south was conscripted to aid in these purposes, and it was a simple
matter to proceed from there to filling in between the two existing wharves to form one giant
pier at that point on the Waterfront.

Subsequent events in the design process would alter considerably this part of the June
1962 plan. It is important, therefore, to delve further into the reasons why, in early 1962,
decisions on Long Wharf and Central Wharf took the form that they did, for we would like
to be able to compare relative states of the design problem over time.

The cove possessed disadvantages from the designer's viewpoint. Of a seaward orientation
were desirable, then the new body of water wedged between Long Wharf and Commercial
Wharf was on the wrong side of State Street to be of any utility in attaining this goal.
Some other focus to the south of Long Wharf might succeed if it were a keystone in the
complex of activity likely to develop in this sub-area. It seems that it did not matter very
much to the designers just what that focus should be, so long as a site could be reserved at
that time. The plan shows an aquarium, not because it was a solid input in 1962, but
because it was a good example of the kind of activity the design team had in mind and one
which had an outside chance of materializing. As Long Wharf was simply too small for this,
Central Wharf was an appropriate choice. Further, the buildings on Central Wharf had been
torn down by its owners, so that other new activities in addition to the aquarium might
be placed there as well.

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23 Interview with Professor Myer, April 11, 1968.
Enter an Independent

Long Wharf, Central Wharf, and India Wharf were owned by the same consortium, headed by Theodore Berenson, a Boston real estate developer. Berenson (a cousin of the late famed art historian) had made his reputation in commercial real estate, especially in the art of developing and running suburban shopping centers across the country. But any kind of land interested him, if not for serious development on his part, then at least for resale at better prices. Berenson's group purchased the three wharves in 1958, with the express intention, we are told, of pursuing development on its own. Indeed, Berenson had the market potential investigated at that time and had prepared a plan for office, residential, and hotel uses in the area. To get rolling Berenson saw little reason to keep existing structures any longer than necessary and, to the chagrin of designers and historians alike, did demolish on both India and Central wharves to pave the way for new income-producing buildings. Had he continued in his plans for reconstructing his holdings, there is little doubt that Berenson and his associates would have participated in the Chamber's design process from the outset. However, Berenson leased the wharves to a parking franchise and soon discovered that this interim use yielded surprising profits. Moreover, the Custom House block showed potential for returning good profit, too, and he thought about rehabilitating it. Thus, the developer reversed himself and decided against making large investments in the area for a while and, until 1962, paid scant attention to the Waterfront except for a sizeable donation to the Chamber of Commerce to support the Waterfront Redevelopment Division's planning efforts.

The designers were aware of Berenson's interests in the project area. After all, he

owned almost all of the very property over which they were anxious to gain control. Yet, Berenson’s reluctance to commit himself to development made the future of the area uncertain when the designers were forced to make some decisions. It was not clear if Berenson still wanted to undertake the project himself. They proceeded primarily on their own mettle in prescribing development for the three wharves until, almost on the eve of presenting the plan, Berenson decided definitely to do something in the area. While several of the designers interviewed report that adjustments were made to account for Berenson’s attitudes on redeveloping the property, there was little information to go on, and major adjustments are really not reflected in the plan of June 1962. Only the idea for a hotel, heretofore tentatively offered, became firm, for it was the only thing that seemed compatible with the design criteria.

It presented a problem, however. Central Wharf was not of sufficient size to accommodate the hotel and the bundle of other uses that had accrued. Creation of a new filled-in area between Central and Long Wharves seemed a reasonable strategy for meeting the program and, thus, amalgamating the wharves became a permanent part of that plan. Berenson, then, had influenced the design process by only barely evidencing himself. This impact presaged the role that he would eventually play in developing the urban renewal plan.

On analysis, the plan that Mintz and his colleagues were prepared to submit for public scrutiny reflected a much more sophisticated grasp of the characteristics of the social arena in which the review would occur than did the alternatives of the previous autumn. To be sure, a number of difficult choices had to be made. Berenson was not the only uncertainty. The successful implementation of the proposals would involve a number of independent decisions but, by June, there was a high degree of confidence among the designers that the more critical of these decisions would be made in a way favorable to the plan. The
expressway ramps and the power station were, as of June, thought probable features of the area that outside agencies could cooperate in removing.

The designers were generally satisfied with the way in which they managed the design in areas where constraints and program were certain, except for one: by and large the micro-climate problem was worse than in the earlier round of sketch alternatives. The cove was now north of Long Wharf, and the open pedestrian areas on the wharf were exposed to the potentially worse weather conditions. Moreover, buildings behind the plazas would cast shadows on them for most of the daylight hours. It was an unhappy situation, but one that was left for further study.

Enter Another Designer

The design staff put together this plan under a shadow of heightening controversy that threatened to eclipse the operation entirely. The BRA staff, under the supervision of David Crane, had been preparing a plan for the regional core, and had gained an expertise of its own concerning the Waterfront area. Prior to 1962, Logue’s thin resources at City Hall had not hindered renewal planning efforts in Boston, simply because groups like the Chamber of Commerce could support these efforts and enough Specialists could be brought in to provide much needed services. But ultimate decision-making rested with Logue and he needed counsel from within his own organization on design matters. Crane filled this role for the chief renewal executive. He came to the BRA from Philadelphia in 1961, with a platoon of bright, young urban designers. Boston was an opportunity for Crane to influence city design at a prominent scale, and most of his work in the early days of his tenure was directed towards general conceptual studies at the super-project level. Given the mega-scale of the entire central city, Crane’s task was to devise sets of design policies in the interests of that scale
and to make recommendations on specific actions in project areas that would achieve overall objectives but might be overlooked in project design.

Logue had not opened up many opportunities for Crane to exercise more than a random, ad hoc relationship with any specific project. Crane was anxious for an intimacy with district-level design problems and, in the course of comprehensive studies for the city, had developed particular points of view on the Waterfront. As we have noted, it was a project of extraordinary interest to professional designers. Eventually, it would become the responsibility of the BRA to pursue the project but, according to the overall planning strategy, Logue's organization was scheduled only to be caretakers of the plan entrusted to it by the Chamber of Commerce.

Crane was unhappy with many features of that plan, the development of which he had observed from a seat on the backbench for almost a year. He and his staff agreed with the Chamber's team that maximum contact of land and water was a desirable goal, as was the reservation of as much of the Waterfront as possible for use by the public. He also saw State Street as the doormat to the docks. In general, he and his staff appeared to be in sympathy with the use of some of the land for housing, and also believed that very special activities, like an aquarium, were obvious necessities in revitalizing the project area.

In agreeing with these intentions for a plan, Crane believed there were better ways of accomplishing them that would be more practical and responsive to existing conditions. Indeed, the shape of the Waterfront could be left alone, with the same results ensuing. The wharves, or most of them, need only be restored to safe conditions and in redeveloping them, each could be treated as a separate entity, with its own character encouraged to emerge. This would be a very direct method of building in diversity along the harbor edge. It would be easier for users of the area to comprehend it if the differentiation of the
wharves were made patently obvious. Most of the wharves have unique histories and development patterns anyway, so such a design strategy would hardly violate local standards of continuity with the past. Maybe not quite so much drama would be achieved in minimum tampering with the piers, but, in Crane's view, existing conditions mitigated such an opportunity from the outset.

Actually, a review of the progression of plans that the Chamber's team had developed indicates that it, too, was working toward designs that manifested the integrity of the individual wharves. Logue had forced a modified finger scheme, and the designers were beginning to respond, even though resisting at several places the kind of key actions that Crane proposed. The resistance would ebb in large degree over time, however, so that the profile and character of the land-sea infit would decrease as a root of sustained conflict between the BRA designers and the Chamber's forces.

The proposal to realign Atlantic Avenue, on the other hand, was just beginning to build into the kind of issue in the Waterfront design process that the Washington Street Mall became in the CBD design process. In maximizing the contact of the city and sea, had all alternatives really been explored? Crane didn't think so. True, engineering and cost constraints now demanded that the goal of creating more Waterfront be achieved without building more wharves, docks, and bulkheads. Shifting Atlantic Avenue was satisfactory up to a point, but it was already obvious that implementing the idea involved a complex strategy requiring careful staging of required demolition and relocation in the first phase of execution, demanded the changes in the access ramps to the expressway at State Street, alterations that were strictly in the province of the Massachusetts Department of Public Works, and needed some modifications in the surrounding local street system which was under the jurisdiction of at least two cantankerous city departments. Crane and his BRA
staff saw no reason for the effort that would be involved. Atlantic Avenue, they contended, could be retained on its present alignment. Shifting the road did not lessen its impact as a barrier to connecting the Waterfront with downtown, which Crane believed was at least as crucial as the desire to open up developable land. Moving the road, then, solved only one half of the problem. It would be far better to retain Atlantic Avenue and bridge over it to ease pedestrian access to the wharves. A sophisticated design was possible in which a series of levels could be constructed atop and aside the road, so that the pedestrian crossing could be made interesting and inviting, a design alternative, incidentally, that the Chamber team toyed with at one point earlier in the process. Some air rights construction might be a possible way of increasing the land available for building, but certainly the wharves themselves could be developed more intensively if this were to become necessary as a consequence of leaving Atlantic Avenue alone. Depending on the degree to which this alternative were embellished, it may not have been any less expensive to keep the road straight than to realign it, but, clearly, it was not a proposal that presented the BRA with the potential headaches of dealing with other agencies and with private land-holders in an eminent domain situation. It was not, to borrow a phrase from John Myer, "an accident-prone scheme."

David Crane's passion for insuring the city dweller ease of access to the Waterfront was not an isolated reaction to the plan he watched develop. Crane had come to regard ambivalently the overall physical pattern of existing Boston. Its topography and its history had caused the city to become a series of separate districts which, through the years had developed separate characteristics that have given Boston a diverse and vital feeling that many other American cities could but envy. On the other hand, the entire pattern had become far too disconnected to make this differentiation meaningful. Neighborhood isolation was too high a price for the diversity. The visual and physical linking of the
many districts became a primary objective of Crane's planning efforts at the BRA, using his "Capital Web" concept as a means for achieving seams along which city districts might begin to unite. Thus linking the Waterfront with downtown was just one example of the problem Crane was determined to solve as best he could on a city-wide basis.

Certain residential portions of the city were very much isolated. Charlestown and South Boston sat by themselves and turned their backs to the city. The North End was no less disconnected, and Crane believed that a primary goal of the Waterfront plan --linking that area to the North End-- had received far too casual consideration by the Chamber of Commerce team. It was not sufficient to rebuild the hillside between the two districts in private housing, even if Italians were to be the occupants. Simply the difference in income levels between that housing and the Waterfront housing on the other side of Atlantic Avenue would keep social interaction to a deplorable minimum. In Crane's concept, the joint between two districts must provide those kinds of activities that the respective inhabitants might share, and these activities would have to be in large measure community facilities, publicly provided if necessary. While the BRA agreed that housing was a prime reuse for decaying Waterfront properties, it had received far too much stress at this critical point on the project area's border in the Chamber's plan. Instead, Logue's designers were beginning to look toward reinforcing this corner of the project with a community center and, possibly, a large parking facility that would serve both the North End and the Waterfront residents. Whether the instruments were viable was not at issue; the BRA staff, under Crane, was making it clear that design goals had to be reformulated.

To assist in making a case in front of Logue for a rethinking of the Waterfront plan, 25 For a fuller examination of the problem --and the solution-- see A General Plan for the City of Boston, pp. 10-11.
Crane resurrected the I. M. Pei GNRP plan that had been buried in the files ever since its completion in December of 1961. The New York consultant had only paid cursory attention to the Waterfront in preparing that plan, for its purpose was to support and facilitate the execution of Government Center. However, Pei went so far as to prepare illustrative drawings for the Waterfront which, given the constraints that Logue later imposed on the Chamber's staff, were as fanciful as the original staff designs. Relative to the treatment of the water edge the GNRP was out of phase with the point that the Waterfront design process had now reached. However, the plan intended to keep the present Atlantic Avenue and to make the kinds of connections to the North End that Crane wanted. Furthermore, Pei had suggested less housing and more open space and community facilities near the North End.

In his own counterplanning Crane relied on the Pei plan, for despite its superficiality, it could demonstrate to Logue an alternative direction in which design should go, a direction that Crane and his staff were prepared to pursue, if Pei's concepts moved Logue to reconsider the plan that the Chamber's staff was almost ready to unveil publicly.

Those days in the late Spring of 1962 became bitter ones, indeed. Unfortunately for Crane and his staff, they had entered the process too late to have an immediate effect on it. There was insufficient time to counterplan prior to the scheduled June meeting. Logue, caught between competing design groups, sided with the Chamber's plan, not --it seems-- out of great affection for it, but for practical reasons. It was a supreme effort on the part of local businessmen, an effort that the BRA Administrator wanted to see continued in other renewal areas. He could ill afford to wipe out eighteen months of time and money at this point. Further, he was anxious to get funded for survey and planning, and chose, it appears, to have preferred to let the Chamber staff show its work now and let his own staff reshape it later if necessary (once he could justify the intervention), rather than let the emerging debate
continue for an uncertain period of time, delaying the funding that was so desperately needed to keep the BRA in business. Thus, in June of 1962, the Waterfront plan made its debut.

Emerging Problems in the Social Environment

It was not an auspicious debut. The proposed new design for the tip of central Boston settled little, except perhaps the eligibility of the project area for continued survey and planning work. The design was still quite vulnerable to external manipulation. Logue had not given reassurance that the BRA would act as a bodyguard in getting the plan through to execution in this form, partly because of the mounting objections from within his own staff. Logue's chief problem, however, was that even his influence might not be enough to pressure private money to do its share of the job. Specifically, his first concern was Berenson. Technically, Logue was not supposed to worry about the portly entrepreneur. If the BRA Administrator believed that the plan was the best for the area, then renewal law invested him with the authority to override Berenson and other owners, to acquire their decaying property through eminent domain and dispose of it to someone willing to redevelop in accordance with the plan. However, plans were often easier to come by than developers, especially responsible and solvent members of the species like Berenson. As long as Berenson was willing to redo three wharves at the heart of the project, the BRA could hardly slam the door in his face if he opposed the plan. Logue's legal authority would have to yield to his practical sense if he wanted the Waterfront redeveloped in the foreseeable future. If it was Berenson's will, the BRA would have to negotiate a plan with him.

Berenson was obviously disappointed in the outcome of the design effort that he had helped support. The suggestions for Long, Central, and India wharves left him little option
but to dispose of most of his holdings. India Wharf was intended as the focus of a marina basin, and Berenson could not be bothered developing and running a seasonal venture like that. Much of Long and Central wharves would become public open space if the City followed the plan. There wasn't even an opportunity to sell very much land to an aquarium, for that building was proposed for the space between the two key wharves in the sub-area. About all that Berenson could do if he abided by the design was develop the hotel and some restaurant space and this, it seems, is a real estate venture requiring the tie up of substantial capital (the best mortgage Berenson might get on a hotel would be 60 percent) in excess of what Berenson would ever be prepared to do as a single development project. 26 Thus, when the developer conferred with Logue, Ahern, Mintz, and other Chamber officials early that summer of 1962, it was clear that the Waterfront design process, as a Chamber of Commerce endeavor, had fallen short of producing a workable document for immediate use by the BRA.

The remaining months of 1962 saw limited substantive work performed on the plans. More precisely, the designing that was done could not advance the plan very far, because of the problems that accompanied the entry of Berenson into the process, and the conflict that the BRA staff had aroused. Logue dispatched the latter toward the end of the summer. Crane had prepared his own plan -- a modification of Pei's scheme-- and was intent on forcing the showdown that was denied him prior to the June presentation. Now that the BRA had filed its application for its own planning funds, it seemed appropriate for the agency to decide on its role, and on the role of the Chamber of Commerce from now on. Crane was prepared to take on the project, but the Chamber's staff was not prepared to

relinquish it. Mintz' team began studying the modifications that might suit Berenson -- the marina was abandoned, for example, in favor of a unified apartment tower development for both Rowe's Wharf and India Wharf -- and believed it should carry its responsibility for the design considerably further. Moreover, circumstances had not changed for Logue because he still needed the Chamber, especially for its assistance in relocating the wholesale merchants. Once again he rejected the appeals of Crane and other staff members. The Chamber shall continue to hold prime responsibility for project design for as long as it was interested.

In reaffirming the Chamber's role, Logue had served one master. The other, Berenson, required more patience and careful handling. Logue gave Berenson every encouragement to undertake the project and through his staff and the Chamber's team assisted the developer in finding an architect of solid reputation to prepare detailed designs for his holdings. It was a long process. It presented many difficulties, because Logue was a particular in his image of architects who should work in significant parts of his program as Berenson was in his dim view of architecture in the profit-making private urban development process. At the end of the year, the participants reached an agreement and, somewhat ironically, Berenson signed I. M. Pei and Associates as his design consultants.

Status and Strategy

Ahern's staff of designers and planners was apprehensive about the re-entry of the New York architect into the process. Pei toted with him to Boston an international reputation, both inside and outside the architectural profession, that nobody at the Chamber office could match, not even its design consultants. A considerable amount of designing had already been done, and a number of issues had arisen and been decided, at least in the
minds of some of the staff, purely on their merits. The plan so far was reasoned, and reflected careful and painstaking work. It was time to push ahead, to test the concepts against more stringent criteria and make them "operational." But it was feared that the reappearance of Pei working for a client whose design goals reflected different motivations from that of the Chamber's staff heralded costly conflicts over design, in which old issues might be dredged up again, to be settled this time more on the basis of reputation than on the substantive merits of solutions at hand. The staff attitude was that it was still responsible for the overall design but felt the power to exercise that responsibility, through its influence on decision-makers, would ebb as the process moved on. Thus, the manner in which the designers began to function reflected in part their intense desire to maintain themselves as much as achieve the best possible designs. The basic weapon they could use was simply the fact that they knew more about the project than Pei's staff and could reduce the image gap simply by staying ahead of Pei in the extent to which they remained informed, and applied that information. Essentially Pei gave Mintz and his team almost a two-year handicap. He started from scratch (his GNRP was far too superficial to be worth very much now) in generating and evaluating alternatives for the Long Wharf sub-area and in learning the current constraints under which this had to be done, while the staff, having lived with it since the beginning and exuding confidence in their decisions, proceeded to reinforce its stance with the kind of detailed work that Pei was not yet prepared to undertake.

Reassurances

The staff's wary attitude toward Pei and toward the nature of the way it felt it must execute its role in the process in response to his presence must have required considerable diligence to maintain in the face of a variety of events that were, on the other hand,
signalling that the concept was locking firmly and irrevocably into place and that no one had any intention of usurping staff responsibility for project design policies. The Commissioner of the state's Department of Public Works had expressed enthusiasm about the plan to realign Atlantic Avenue and was very willing to relocate the necessary ramps pending further study by his own technical staff. Also, an erratic and unstable aquarium development corporation was finally persuaded to build on the Waterfront, rather than on either the Charles River or the South Boston shorefront. The corporation was already enlisting an architect, and the Chamber's staff was beginning to examine in earnest alternative sites in the project area emphasizing, naturally, the Central Wharf possibilities. Thirdly, relations among top-level participants in the process were far more cordial than at the staff level. Ahern, for example, met with Berenson when Pei was about to begin his studies, and emerged confident that Berenson was sympathetic to the plan and that he would act cooperatively. Finally, formal arrangements were made for the Chamber's staff to continue to control the project. As 1962 turned into 1963, the Downtown Waterfront Corporation (DWC) mustered around the staff as a legal entity separate from the Chamber of Commerce, and capable of entering into contracts with the City to continue the work in progress. The DWC replaced the Chamber's Waterfront Redevelopment Division and officially ended the Chamber's initial role in the process. In early January, five days after the BRA received Federal approval of its survey and planning application, the agency officially replaced the Chamber as a client as it awarded the DWC a one-year contract to prepare the final urban renewal plan.

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27 Memorandum to Mr. Logue from Mr. Ahern, December 11, 1962.
Restructuring the Design Process: The Birth of the DWC

The formation of the new corporation was a technical move primarily, as the Chamber endeavored to rid itself of a theory of organizational problem of its own. The original Waterfront Redevelopment Division, doing a particular job for a particular client, was not an orthodox Chamber activity and, hence, presented the Chamber with the difficulty of trying to integrate it into the whole spectrum of general services that such business organizations traditionally provide. Ahern's division acted autonomously, was funded through specific donations (such as Berenson's) rather than through the Chamber's budget allocation procedures, and tended as a result not to be responsive to central organization. The Division was also physically divorced from the Chamber, operating out of Quincy Market, on the other side of the financial district from Chamber headquarters. To overcome its organizational discomfort, the Chamber had two options. It could either contract directly with the BRA for the continued planning work and control more completely the Division's operations (as that contract provided all the monies for the upcoming year), or it could sever formal relationships completely, and allow Waterfront planning to become a separate enterprise. Since the former alternative would have immersed the Chamber's Board of Directors more deeply in the program than it was prepared to go, leading to an added responsibility might detract from its other functions, it was decided to form the new corporation instead. The Chamber nevertheless was not really eclipsed by the DWC to the extent the formalities might indicate; it continued to hover quietly around the project, still very important to Logue for its continued support and influence in getting the sticky machinery of business relocation to roll smoothly.

Ahern became the secretary of the DWC and remained the overall director of its once and only project. Mintz continued as Ahern's assistant and supervisor of the design operation.
New faces appeared on the staff, and some of the original designers left for other jobs. Lynch and Myer were re-engaged as Mintz' consultants, but their roles would be more peripheral, as the perception of the status of the design shifted from developing a concept and persuading everyone of the viability and eligibility of the project to refining it, that is, making it "operational." The BRA, now funded for the Waterfront project, added new staff and diverted some existing staff to work with the DWC team. Primarily, Logue's assigned personnel at that time assisted in other aspects of project planning than the actual design process, including business relocation planning, the extensive effort involved in drafting legislation to insure the necessary rights for prospective developers in the complicated business of developing on state-owned tidelands, the preparation of inter-agency agreements that would be necessary to implement the design proposals, and also the relations with developers and with the public in general. Unlike the Central Business District project, Logue was content with a subservient staff role in the Waterfront's design process: he appointed no BRA project director at the initiation of the Survey and Planning contract, preferring instead to let Ahern assume responsibility for both BRA and DWC staffs.

The birth of the Downtown Waterfront Corporation, in sum, was auspicious. Its directives in January 1963 were clear, the design concept, despite some nervousness about its capacity to accommodate Pei, was strong, the BRA was preparing cost estimates, and it seems as if all participants were prepared to spend the rest of the year efficiently and harmoniously.

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28 This perception, at least, was the outlook of several new members of the design team in 1963 (Interview with Mr. Loverud, July 12, 1967).

29 In retrospect, Ahern feels he never really had the control over BRA personnel that this arrangement implies. Despite the absence of a project director, the BRA still had functional directors, like David Crane, who exercised influence on junior staff. (Interview, March 29, 1968.)
Enter Mostly Everyone: A Survey of Problems

Lynch summed up rather well what appears to have been the reason why that final year did not turn out to be an easy one, and why the concept was almost swallowed up in the course of it: the problem was changing, but not so much in its technical nature as in its social character.\footnote{Interview with Professor Lynch, May 6, 1968.}

That is, the physical area being designed remained relatively stable throughout the design process even to the extent that the boundaries never changed much,\footnote{Actually, there were two changes in the boundaries of the problem area in 1963, both recommended by the designers and both in the interests of simplifying the problem even though in one case more acreage was added. That case was a six-block area around the Custom House Tower and the old Grain Exchange Building, just west of the Central Artery, included because changes would have to be made there as an integral part of the total proposed circulation system. The area dropped from the problem was six blocks along North Street on the slope of the North End. It was a residential area and its 80 families were socially oriented toward the rest of the Italian area. This deletion eliminated the possibilities of family relocation from the problem entirely. Not incidentally, it took some political pressure off the BRA at the same time.} but as more people entered the process to participate in solving the problem -- Berenson and Crane were but early examples -- they themselves brought information, criteria, and constraints which served to keep design possibilities in flux. The remainder of this case study will mostly structure around these external influences as they shaped several key areas of the overall physical design problem and the strategies for dealing with them. We shall begin by sketching the status of these areas as of the Spring of 1963.

In the context of key problems to be solved, I. M. Pei reduces to a prime participant in but one aspect of the design process -- the Berenson wharves. But because the sub-problems of the Waterfront project soon tended to become interdependent he appears as a critical
participant in the Atlantic Avenue problem which, as it turned out, was far from solved that spring. Indeed, Pei would eventually reverse his position as originally stated in the GNRP and support the alternative of relocating the road because it would turn out to be in the best interests of his plan for Berenson's holdings. It would be a critical move, given Logue’s and Berenson’s respect for Pei’s judgement, for events early in 1963 had Logue poised to strike the alternative from the plan at mid-year.

The road relocation depended for its successful implementation on far too many factors beyond the control of the City and the BRA to be an intrinsically feasible alternative. Feasibility would have to be an artificially created characteristic. While David Crane and some of the BRA staff could not reconcile the effort required to create a feasible solution in terms of benefits gained, Logue could up to a point. Had this not been the case, the Administrator could have exerted greater leverage on the DWC to abandon the alternative as soon as the contract was signed and Logue himself was the client. Instead he patiently allowed the DWC to carry on, it seems, for two related reasons. First, although he could not justify the benefits in terms of circulation --one expert claimed it made no sense whatsoever from a traffic point of view— he and others at the BRA did see that it offered opportunities for "designing" new parcels of land that had reasonable shapes, better access, and good size (in short, some essential ingredients for getting high appraisals of the market-ability potential of the land). Parcelization, especially as an afterthought of circulation improvements, is one of those nagging problems in urban renewal that often command a great deal of design time and to little avail in the face of rigid and inflexible geometric highway design specifications. In the Waterfront, parcelization worked out much more

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32Interview with William McGrath, December 13, 1967.
neatly than in most projects. Land assemblage is generally regarded as the prime objective of urban renewal, and to Logue and the BRA obtaining a series of high value disposition parcels was probably worth the cost to the project of realigning the road per se. But was the value added to the property greater than that cost plus an additional cost against the project’s books of moving ramps and a railroad, too? With good estimates an analysis could have answered the question one way or the other but, to our knowledge, no such rational approach was employed at that time. Without it, the decision seems to have been a judgement call: the answer was no; the BRA could not afford to foot the total bill.

The enthusiasm of Commissioner Ricciardi of the Department of Public Works was the related reason for Logue’s patience. So long as there was a possibility of the Commonwealth of Massachusetts sharing in the cost of the improvement, the BRA was willing to keep the matter open for a while. The railroad issue was more complex but equally worth some effort to resolve in the interests of a new Atlantic Avenue. The Union Freight Railroad maintained the pair of tracks between North and South Station in the bed of the existing Atlantic Avenue, and although its shuttle business had declined through the years the company still managed a few strings of boxcars each day. From the outset of the project it was the City’s intention to get the railroad to discontinue its operations altogether.33 This was one of the assumptions on which the early design studies proceeded, although implementing this objective was hardly a matter or responsibility for the designers. It was simply assumed that the BRA would be able to do it, and that developing design possibilities concerning Atlantic Avenue could proceed unimpeded. Logue, in fact, was not interested in a compromise

33 See the Summary Report to the Authority from the Downtown Waterfront Corporation, February 8, 1964. The parent company, the New Haven Railroad, was bankrupt at this point, which contributed to the City’s confidence that it could persuade it to cease operating a losing proposition on the Waterfront.
whereby the railroad would be relocated onto the new route, because of the relocation cost.

To put it simply, he wanted it out of the area. The railroad, then, was the second contingency on which the Atlantic Avenue proposal hung.

Logue could be patient, but he could not wait forever for Ricciardi and the Railroad to make up their minds on their separate problems. Much of the design process depended on a final decision on Atlantic Avenue, and the BRA wanted that process to terminate by the following winter when Survey and Planning funds would run out. In April, he made the problem clear to the DWC staff and said that if it couldn't resolve it favorably by the first of July, especially the ramp reconstruction, he would have no alternative but to drop the realignment of Atlantic Avenue from the Urban Renewal Plan.34

This alone would have been more than enough to worry the designers during the first quarter of the Downtown Waterfront Corporation's existence, but other special problems joined the prominent one at about the same time. Other assumptions around which the draft plan of 1962 was built were now beginning to appear very fragile. The staff had set about the task of figuring acquisition costs very carefully, based on the proposals of June 1962, and the estimates were still running relatively high for a project that the BRA never really considered as an expensive component of its overall renewal program. This took on special significance in the face of mounting uncertainties about reuse possibilities, because it made the staff think carefully about the amount of physical change it could realistically influence. The design proposals for the wharves in particular lapsed into a precarious state.

Early and ambitious plans for redeveloping Union and Battery Wharves into an area of

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34 Minutes of the DWC staff meeting, April 10, 1963.
high rise apartment buildings and expensive town houses were discarded after June of 1962 in the face of an unresponsive market. The cost of acquiring the two substantial structures in the sub-area -- the MBTA power station and the property of a large lobster dealer -- contributed to the decision, as did the myriad problems in relocating these facilities. Like the Railroad, the continuation of the power station was counter to the objectives of the plan and it was assumed initially that the BRA could coax the MBTA into abandoning it. Early in 1963, it began to appear that the Transit Authority was not interested in shifting its aged but useful facility to a new location, and since the BRA was not about to make an attractive offer, the building moved back into the plan, pending further coaxing. The lobster dealer on Battery Wharf was considerably larger than earlier realized, and it was discovered he attracted a large number of visitors to that end of the project area. If luxury residential reuse were still possible in light of the unimpressive environment created by the power station, the dealer in all probability could have been bought out. Such was not the case, so its acquisition wasn't worth it. This now left two solid uses commanding Union and Battery Wharves for which neighbors were very hard to find. While a vacant portion of Battery Wharf could be developed into public open space, Union Wharf was becoming an enigma in the minds of some of the participants for, other than housing, no reuse possibilities seemed likely, and housing was rapidly becoming a very poor alternative. As will be discussed later, this problem was resolved but, in the spring and summer of 1963, it remained almost as uncertain a feature of the plan, it seems, as did Atlantic Avenue.

To the south, both Lewis and Commercial Wharves had developed into major problems in their own peculiar way, as the designers were unable to exercise any control over them almost from the initiation of the design process. Physically both wharves and most of their wooden buildings were in substandard condition, and when the designers were originally
developing the "pool" schemes, the tip of Commercial, at least, was usually numbered among the many expendable portions of the Waterfront at that time. Neil Tillotson, an old-line Bostonian with an evident and almost passionate affection for the Waterfront, owned both Lewis and Commercial as well as some property on the inboard side of Atlantic Avenue. As it became known that the Chamber's design team was proposing massive surgery in the project area, Tillotson was strong to react, but did so not by entering into the design process dialogue directly -- which would have been considerably better from the designers' point of view -- but, rather, by boycotting it entirely. He refused to talk to the BRA but began putting large sums of money into the restoration of Commercial Wharf according to his own ideas of what constituted an adequate job. As in the case of Berenson's demolition of India Wharf, the BRA was powerless to stop Tillotson's unilateral activities. His task was an improbable one given the millions of dollars necessary. By June of 1962, it was clear that the major structure on the wharf would have to be a permanent part of the plan after all but, as that plan reflects, the designers had hoped to get Tillotson's cooperation in the rebuilding of the rest of the wharf according to their concepts, that is, by combining new construction with restoration on the wharf. By the spring of 1963, Tillotson had run into trouble with his private version of urban renewal and had begun a process of selling out his holdings, both on Lewis Wharf and inboard. It was not at all certain just what action the taciturn Yankee would continue to take on Commercial Wharf, and thus, the designers were at yet another point in the Waterfront quite far removed from being a central influence on decisions relevant to the design process which they presumably directed.

Due south of Tillotson's holdings was the Long Wharf sub-area, and more than ever its future was cloudy as owners, potential investors, and interested professionals alike began to examine particular design possibilities more carefully. The New England Telephone
Company, for example, consistently stood firm in its intention to retain its large old building at State and Atlantic, so from the beginning the designers learned to consider it a fixed feature of the plan. It wasn't a glamorous structure but it did not obstruct the basis for the Waterfront's redesign, for Atlantic Avenue could be realigned around it. More importantly, the utility company gave very early indication that it might rank second only to Berenson's group in terms of its investment in new construction in the area: it was prepared to invest between ten and twelve million dollars in a companion structure across State Street from its existing building. In 1963, however, the company was having second thoughts about a waterfront location and was considering alternative sites closer to the heart of downtown. The floundering status of reuse possibilities in general would be dealt another blow if New England Telephone withdrew its interest from the project area, for the site was suited to office use and the market for speculative office space was decreasing throughout Boston with the advent of its building boom. Thus, a key site in the Long Wharf area was in jeopardy, and the design process once again hung on decisions being made independent of it.

The Role of the Design Advisory Committee

The overall concept for the Long Wharf sub-area once again came under attack at about the same time these site-by-site crises were appearing. While Ahern, Mintz, and their team were coming to grips with new information and criteria of a non-visual character barely evident in 1962 they got reaction to their evolving proposals from a group whose ranking criteria were primarily visual and functional, and whose members had a recognized

proficiency in finding solutions to problems involving these criteria. In April 1963 a meeting was arranged with the Design Advisory Committee of the BRA to discuss the design for the project. The Committee was composed of some of the more highly-regarded architects in the Boston area, whose function in Boston's Renewal Program was purely advisory. It convened irregularly, mostly when disputes between the BRA designers and other designers working for private clients could not be adjudicated at the staff level, or when the BRA staff had particularly knotty problems it could not unravel by itself. Officially it was a powerless committee, in that it could neither approve nor veto any design. It was simply another voice on special kinds of issues. Unofficially, the committee could be extraordinarily influential in at least three ways, each of which the BRA design staff endeavored to use to its own advantage. Similar to the DWC staff's reaction to the appearance of Pei as Berenson's architect, the BRA staff felt it was dealing with reputations rather than substantive issues periodically in its dealings with builders' architects. On these occasions it was extremely helpful to employ the committee as a surrogate (where it agreed with the BRA staff), to match the outsider's reputation and have the issue debated among equals. In this way, the committee was often an influence on other leading designers where the BRA staff proved inept. The BRA staff could also appeal to the committee in cases where it felt the opinions it offered could influence Logue, his board, and other participants to weigh visual criteria more heavily when the staff could not. Finally, the BRA staff would use the committee as a means for articulating criteria and design possibilities of the committee's own choosing. It is more in this role that the committee proved important at this point in the Waterfront process. The DWC team was no match in reputation for the committee, but whatever visual issues existed

36 Present at the April meeting were Nelson Aldrich, Lawrence Anderson, Pietro Belluschi, and Hugh Stubbins.
could be put in perspective to the mutual advantage of both staffs.

At the meeting there were many areas of agreement over the plan, such as the relocated avenue, the underartery solution, and the general character of the area, but only the central Long Wharf sub-area received sustained criticism for failing, the committee thought, to reflect a broad range of physical criteria. The filling in between Long and Central Wharves was particularly bothersome to the panel. Boston, it said, was in the process of creating an unusually large inventory of plaza areas downtown, including the large paved expanse at the core of the Government Center and the expanded and redesigned Copley Square on the edge of the Back Bay. It would be better not only for the image of the waterfront but also for diversity in the downtown pedestrian system if the heart of the project were a water center rather than a paved center. From a development point of view this might reduce the available land but the committee felt the plan for the sub-area was too visually cluttered with buildings as it was. This not only applied to land coverage but to height as well, because a particularly objectionable feature of the area was the proposal that whatever is constructed on the proposed telephone building site be about thirty stories high. At the district scale, height lent some congruence to the plan, for it was intended to establish visually the dominance of the most important circulation interchange in the project, the intersection of State Street and Atlantic Avenue. The Committee felt that the consequences of building so high should be considered primarily at the inter-district scale and objected to the height on the grounds that it would visually blur the edge between the Waterfront area and the nearby financial district. Lower buildings in general than in the downtown core would be a better policy on visual form for waterfront redevelopment.

37 This account is based on the Minutes of the meeting, April 8, 1963.
The architects were pleased with the visual link along State Street from the Government Center but felt that the termination of the vista—the massive Quincy Cold Storage building at the foot of Long Wharf—was inappropriate as a focal point. The old building had been in and out of the planning with almost cyclical regularity for both technical and political reasons and still no agreement was in sight, not even among DWC staff and consultants. The Design Advisory Committee only served to reinforce a visual argument that, at the time, was economically unsound.

The entry of the Design Advisory Committee into the process would have some influence on the urban design as time went on. Indeed, it advanced criteria for explicit consideration that would keep some of the designers aware of their broader aims even when submerged in the details of site planning. Gradually the filled area between Long and Central Wharves would be cut back until in the final plan, it would disappear entirely except for a pedestrian bridge over the water between the two wharves. However, the absence of the Quincy Cold Storage building from the final plan seems more the result of the Berenson’s team’s vested interest in Long Wharf rather than large-scale visual considerations, as we shall note later. Building heights and land coverage would become a continuing issue, quite well illustrated in the redesign of Rowe’s and India Wharves, as we continue to move south in our analysis of the status of the design in the first part of 1963.

The Problem of India Wharf

Upon Berenson’s entry into the design process, the design team shifted to India Wharf the residential towers programmed for Rowe’s Wharf, but the team was still thinking of the two wharves together as a unified development to define the end of the waterfront. Berenson’s instructions to Pei did not reflect this attitude, of course. The BRA, in its own very careful
market forecasts, set at 600 the number of dwelling units in high-rise development that the
designers were expected to translate into forms spread across the two wharves. Berenson's
group, with less systematic forecasting techniques, fully expected the developer could
handle 1500 units, and gave this program to Pei with instructions to cram them all onto India
Wharf. Predictably, the twin differences in site size and site density led immediately to
patently disparate design possibilities for this end of the project area. Even when Pei's
office balked at the estimate handed them and got Berenson to compromise at 1200 units, and the BRA, in its turn, had second thoughts about its own marketability study and upped
its program to 900 units, the gap was still significant and the question of the site size
still remained unresolved. The DWC and the BRA, conscious of height and of the imposing
bulkhead and foundation constraints in addition to the above design criteria, developed a
proposal which set five towers of about 20 floors each on the pair of wharves relatively close
in toward Atlantic Avenue. Pei, with only a passing nod at the cost constraints, submitted
a first scheme that extended India Wharf seaward in an arc-like fashion, bending north
toward Central Wharf, on which he placed about half a dozen towers of between 20 and
25 stories each in order to satisfy the criteria he was instructed to use. It was evident to
all participants that Berenson and the BRA had some serious discussions about the Waterfront
looming on the horizon.

38 Edwin Abrams, the group's project director, candidly admits that the forecast was
based on no information about the luxury market in Boston, but on the principle of
building abreast, rather than ahead of the market. In other words, 1500 units was not
the market, but "sounded" like a maximum Berenson could handle if he had to. Naturally,
he needn't build them all at once.

39 Interview with Mr. Abrams, May 27, 1968.

40 Interview with Mr. Loverud, May 24, 1968.
The Plan of September 1963

The status of the project as spring moved into summer of 1963 is best summarized as uncertain. What began as a design process in which criteria of inherent interest to designers might receive due consideration had become a process much more typical of the way Boston went about solving problems in its physical environment. Some factors had slipped into the hands of participants whose positions elsewhere in the system by which cities are planned and built allowed them to operate independently of this particular design process. Other factors, especially the ambiguous market for reclaimed urban land on the Waterfront, were intractable bottlenecks to rational and creative design decision-making. Problems, to put it simply, could not be solved with confidence in 1963 in the same kind of innocent environment with which solutions were generated and evaluated in 1961.

In September, 1963, a revised plan was presented to the Mayor and to about 250 leading citizens of the community as a prelude to the final document and, judging from extensive press coverage, as a means for stimulating public enthusiasm. The plan was an up-to-date statement of the status of the project, carefully reflecting constraints not apparent in the draft plan of June 1962. Most striking in this respect was the general profile of the land-water edge, as the new plan appeared much more faithful to the existing configuration of the wharves than did its predecessor. The separate identities of each finger were clearly established or at least emerging: the attempt at unifying the wharves from Commercial through Battery into a homogeneous large-scale residential "neighborhood" was abandoned; and the infill that effected the twinning of Central and Long Wharves to create a gigantic projection had been cut by about half, so that each of these wharves, though part of a central development area, began to reassert themselves as individual elements therein.

A curious feature of a graphic plan at any point in time is its sense of finality, the
appearance of a multitude of decisions made under conditions of certainty that are irrevocable. This sense is transmitted, it would seem, by the overall uniformity with which the product is drawn, alluding to a decision process that likewise progressed uniformly. Each decision is as perfected as the next. As we saw in the CBD design process, such an even quality of development is unlikely, possibly undesirable. Indeed, if a graphic technique were utilized that showed the product as a dynamic and variegated collection of decisions, rather than as a uniformly stable pattern, it would appear quite different in many cases of complex design. Judging from the status of the project in the spring of 1963, the Waterfront plan a scant three months later, in September, would be expected to be such a case. It is, but the intervening summer had produced enough decisions by errant participators to lend some stability to the document so that, while the plan of September reflects a far more manageable situation than it honestly was, it would have been a mistake to say it reflects wholly uncertain circumstances either.

New England Telephone finally decided during that summer to expand on the Waterfront, with an 18-story tower, a move that cemented a critical joint in the plan along the State Street axis. Tillotson gave up in his personal feud with the public planners, possibly because he quickly rented the 65 dwelling units in his rehabilitated Commercial Wharf Building. He was now anxious to redo Lewis Wharf --with BRA technical assistance this time-- to make between 100 and 200 additional apartments and was willing to sire the kind of new housing on the wharves surrounding the old buildings that had been the design concept since 1961. Altogether, it looked as if his investment might total as much as eight million dollars. To the north, on Union Wharf, the Transit Authority finally made it clear it would not budge. Unpleasant though the decision must have been for the designers, it at least ended a wearying guessing game.
These three decisions have remained in effect at the time of this writing. The design for the Long Wharf sub-area likewise began to solidify in that summer, too, but the circumstances under which decisions were made would alter unexpectedly after September, thus voiding a large portion of the design that, to the designers, represented mastery of a problem that had been perceived as theirs to master.

Although Berenson's group would continue to act aggressively toward the apartment complex on India Wharf, it was relatively docile concerning Long and Central Wharves, being very anxious to accommodate the Aquarium Corporation. The corporation, for its part, had consented to a location on Central Wharf and it was agreeable to BRA making specific recommendations on siting. Thus, the major investors and the key inhabitant in the area deferred in their decision-making to the BRA and the DWC. It was an important area for the designers to control.

With this freedom, the designers were able to study alternative possibilities for the sub-area that could emphasize criteria that they valued highly. Effective control over design, in this case as in so many others, meant freedom to rank the criteria for design. Satisfying two of these criteria had plagued the process since Myer's early studies. First, the down-harbor, seaward orientation had remained a difficult one to establish. Second, the micro-climate was far from ideal. The designers failed to solve these with large-scale manipulations along the edge of the water because the decision to retain the edge's finger-like profile effectively constrained them from making the necessary alterations to the configuration to satisfy these criteria. It was possible, albeit with less drama and directness, to attack the same problems at the smaller scale through careful siting of the forms on the fingers of Long, Central and India Wharves with the assumption that the visual and spatial effects of the siting should be perceived most strongly from the major
arrival point in the area, the terminus of State Street at the foot of Long Wharf. Upon arriving at that juncture after, say, a stroll down State Street from the Government Center, the observer should be drawn to look to his right, at approximately a 45-degree angle to the line of his stroll. This vista would yield to him the general direction of the sea.

Encouraging and sustaining this visual contact was done with great subtlety and symbolism in the plan of September 1963. The Aquarium Corporation's decision to locate on Central Wharf was very important, for a small and striking building placed about midway down the wharf could serve as the visual attraction the designers believed they needed. Attendant to the aquarium in the new plan was a large rectangular "hole" in the filled-in area between Long and Central, a pool of water which lay between the observer and the building as a further alluring element to capture his attention. Around the pool would be the focus of pedestrian activity in the sub-area; it would be the water center that the Design Advisory Committee had urged should command the major plaza area.

The aquarium and plaza were intended to shift attention from the open vista down Long Wharf which was presumably the compelling view from all the way up State Street that served to invite people to the Waterfront initially. This view acted as a decoy to get the observer to a point where the designers could operate on him. To insure that the aquarium and the seaward vista beyond it were the new focal points, the design eliminated all other possible competing views once the observer moved into the wharf area and plaza, by situating the aquarium in the center of a semi-ring of taller, bulkier structures which defined more or less the periphery of the sub-area from Long Wharf to India Wharf. These buildings included Berenson's trade center on Long Wharf (which obscured the northerly view toward Commercial Wharf), the two Telephone Company
FIGURE 14. -- LONG WHARF SUB-AREA CONCEPT, SEPTEMBER, 1963
Buildings, additional office buildings to the west, and the apartment towers on India Wharf, so arranged that, from the State Street terminus, they formed a wall behind the aquarium. Berenson's motor hotel was also situated strategically, spanning between Long and Central Wharves tying the decoy view to the desired view as a solid mass preventing any view straight out into the harbor toward East Boston and the Airport. The overall effect of these barriers was to give a cove-like sense to the sub-area. The aquarium, according to Robert Loverud, Mintz' chief designer, was destined to "sit like a jewel in the center of carefully created space," an intimate and protective environment that was missing from the draft plan of fourteen months earlier when the designers were deferring to Berenson on the use of Central Wharf.

The designers believed that micro-climatic conditions were finally improved by this new design alternative. The large outdoor pedestrian area flowed around the aquarium to garnish precious frontage on the south side of Central Wharf. Because the aquarium itself was intended to be a low building it would not cast long, looming shadows on the water center and promenade on its north side. That area, in turn, was now shielded, it was hoped, from bitter northwesterlies by the trade center and the telephone buildings. It was a pleasant solution to a persistent problem. And in September it seemed like a permanent solution too.

On the opposite side of the ledger, the new plan concealed some problems, reflecting only the way in which one set of participants -- the form-makers at the DWC -- would have desired their resolution. Berenson and Pei were still intent on getting all high-rise

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41 Interview, May 24, 1968. This, we are told, is the intention that guided the Government Center plan, where the new City Hall is a low, bulky mass, set in its plaza and ringed with carefully placed larger buildings.
development on Berenson's India Wharf property. The BRA staff, attempting to negotiate a settlement, relented on its height restriction and compromised at 25 stories. Also, the September plan specified 1,000 dwelling units. But the DWC staff remained firm in recommending five towers, three on India and two on Rowe's, to meet the program. Thus, the plan continued to give Berenson but a portion of the units he wanted the option to market, though a few more than the previous June. While Berenson was getting little satisfaction from the BRA, he wasn't faring much better with Pei, who was running into serious design conflicts in trying to reconcile competing criteria. The BRA had taken an adamant stand on refusing to pay for the new bulkheading that Pei's initial schemes would have required. Since his own client had no intentions for paying for it either, these schemes quickly washed out. When Pei began to pay more careful attention to cost constraints he discovered what the DWC had discovered almost two years earlier, namely, he would have to build into shore as closely as possible. But in order to meet Berenson's program under these circumstances he was forced to build up, well beyond the BRA restriction, even when liberalized. It was impossible to meet either the BRA or the Berenson market forecast on India Wharf alone, in a visually and physically satisfactory way. This was the message that the plan of September 1963 was sending. Berenson's people, however, were not yet listening.

Two other large components of the design in September likewise rested on very insecure footings, but in these instances the DWC admitted publicly that this was the case. When it became apparent to BRA staffers that early designs were neglecting the connection to the North End, they made attempts to follow through on David Crane's criticisms. The idea of a community center to bridge the two districts was a favored one and when the high-rise apartments that appeared in the June 1962 plan on the in-board side of Atlantic
Avenue at the base of the North End were dropped from consideration, the staff urged that a sports center succeed them in that part of the site facing the proposed Barricado park. Since this seemed more useful than an extension of the marine park (which was contemplated), the facility for ice skating, bowling, and sporting events entered the plan. It did so, however, in the hopes of sparking some interest rather than with any solid prospects in back of it. It entered the plan, it seems, to fill a void in it, hardly Logue's preferred way of doing things.

The other, more menacing cloud was hanging over the Atlantic Avenue realignment proposal, and the conviction with which it was drawn and presented to the Mayor in the new plan could hardly conceal the fact that its fate was really undecided. When July came and Commissioner Ricciardi's staff expressed sympathy with the idea of relocating the troublesome ramps of the Central Artery, but reckoned the costs as beyond the State's capacity to absorb, Logue, true to his word, dropped the relocation of Atlantic Avenue from the plan. It was a reluctant move by Logue based on what we can only suppose was a reluctant decision by Ricciardi, and Mintz especially was not willing to let the matter subside under such circumstances. Of the many people who were participating in the designing of the Waterfront, Mintz was probably the most convinced of the benefits of the relocation. A lot depended on it, and it was not a decision that could be handled as an isolated case. The importance of relocating Atlantic Avenue was much more evident now that the design had reached almost the final stage. Mintz argued that it was important enough to be worth another try to get Ricciardi and his engineers to change

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their minds, and persuaded Logue and the Board of the Redevelopment Authority to hold off a final decision while he worked out the problem. \textsuperscript{44} They consented to delay action, and in August, Mintz returned with a letter from the Commissioner stating that his department would now approve the relocation and assume responsibility for the ramp changes.

Ricciardi's letter was a singular note of triumph in an otherwise dismal summer for the design team. If a victory it was a muted one for, almost immediately thereafter (and for reasons unrelated to this design process), Jack Ricciardi was removed as the Commissioner of Public Works in Massachusetts; while the plan of September could show the proposal to realign the Avenue on the strength of a key written approval, it was very uncertain if in the new circumstances, the letter was as meaningful and as binding as it appeared to be, or whether the exhaustive and protracted negotiations were just a dress rehearsal for a command performance before a new commissioner.

\textbf{Chain Reaction: From the Aquarium to the Avenue}

The plan of September would resolve rather quickly into a final plan despite its shaky status. Aside from Atlantic Avenue, two major portions — at opposite ends of the project — were the keys to its resolution. The Union-Battery Wharf complex ceased to be a problem when the fish dealers who were to be relocated desired if possible to establish their new quarters somewhere in the project area. Many details would have to be straightened out, especially in staging the relocation, but the final plan for Union-Battery established the area as a gigantic seafood and lobster center, almost encircling

\textsuperscript{44} It was a problem that extended beyond Ricciardi's agency. John Myer calculated that altogether nineteen separate agencies and groups at all levels of government would have to approve one or another aspect of the proposal, and the State DPW was really only one of a small handful of the more important approvals. (Interview, April 11, 1968.)
the old power station.

At the southern extreme of the waterfront, the debate over high-rise development on India Wharf would also cease within a few short months after the September plan. But this case was entirely different from Union-Battery. The seafood center was a decision that was independent of the rest of the plan, one of the few that would work this way. However, settling the high-rise issue followed from massive and significant shifts in the design for the entire water edge south of the Barricado park and, once settled it, in turn, forced the BRA into the Atlantic Avenue realignment regardless of all the required approvals.

It had looked to the designers as if their proposal of that September for the Long Wharf sub-area was locked into place as a statement of public-private policy. They certainly hoped this was the case because of the success of the design in meeting creatively a mixed bag of criteria, including some of their own. In the fall, however, the Aquarium Corporation expressed disaffection with its Central Wharf location and thereby touched off a chain of events that would end on Atlantic Avenue. The non-profit Corporation, as we have mentioned, was never really secure in its objectives because of its own internal fiscal and political problems. There were times when it looked as if the aquarium would never be built, and its sponsors had difficulty enough nursing it through on a day-to-day basis to worry very much about the long-range future of popular oceanography in Boston. Toward the end of 1963, the perspective of the Corporation began to widen, as confidence in its capacity to build and sustain a multi-million dollar fish house negated its immediate worries. Now the future became important and it hinted at an expansion of the activities that the Corporation would undertake. The aquarium itself might expand someday, more exhibits should be added both inside and out, the Corporation should be prepared to
sponsor and conduct research and educational programs in conjunction with its foremost function of operating a very special attraction.

There were no target dates for this expansion, which really didn't matter to the Corporation. There was also no physical space on Central Wharf in the September plan for this expansion, and this now mattered very much to the group. It believed that the only reasonable alternative in light of no clear plan for the future was to have all of Central Wharf to itself, to insure the utmost in flexibility. Additionally there was the feeling that the aquarium was a significant enough building to warrant an entire wharf anyway. Further, so the reasoning went, it would be desirable to situate the new aquarium further out on the wharf rather than at the mid-point, to program the next phase of the overall development (either a research building or restaurant) at the opposite end, and to use the vacant midsection for parking, or future expansion, or simply as an open plaza to set off the aquarium behind it like a New England Taj Mahal.

The change in attitude had obvious implications for the design of the entire sub-area. It will be recalled that the satisfaction of some important visual criteria hinged on the strategic siting of the aquarium and that, through deferential behavior on the part of participants outside the design system whose motives could have dominated the design, these criteria received priority from the designers in locational policies on critical building elements of the sub-area. Under the Aquarium Corporation's new proposal, the observer would perceive "the carefully created space" almost opposite the way intended. The close, cove-like atmosphere with premeditated vistas would give way to an unrestrained and unstructured visual experience as the observer arrived at the foot of Long Wharf. The middle part of Central Wharf would be vacant but, more importantly, the motor hotel could no longer span the wharves and be an effective tool in the design.
Even moreso, then, would the aquarium proposal lead the design toward differentiation and segregation of the individual fingers, rather than an integration at the point the designers most ardently desired it.

There seems not to have been much doubt among the designers that the BRA would respond in conciliatory fashion to the Aquarium Corporation's plea for the whole of Central Wharf. It would have been difficult to act otherwise, for no one knew for sure if the Corporation would stay in the project under any lesser conditions, now that it perceived its own problem as one of staving off poverty of land and of image.

This created a new set of circumstances for the BRA, and the agency was clearly on the spot. In order to accommodate the aquarium group it would once again have to reckon with the Berenson group, this time on two counts. It would have to help somehow in the relocation of the motor hotel onto an already-crowded Long Wharf. In addition the BRA would have to negotiate a purchase of the remainder of Central Wharf from Berenson so that it could control its development, and either lease it to the Aquarium Corporation at a nominal fee, or sell it at a write-down, or donate it outright. The position of the Berenson group was enviable, for it could negotiate mostly on its own terms. Those terms turned out to be rational enough from the point of view of the immediate BRA problem that had to be solved, even though the settlement had repercussions for other problems. It was agreed that in return for title to Central Wharf, Berenson would receive certain BRA-owned properties that would be useful in other portions of his plan for redevelopment on the Waterfront. There was nothing illegal about this kind of trade. Cities will often swap public land for private where the public interest would be served, and the aquarium was important enough to the BRA and the city to warrant the trade. Indeed, the decision had to be made that a new aquarium
complex on Central Wharf was more in the public interest than being able to maintain independent control over several other key features of the Waterfront for, at the same time Berenson got his land, the BRA effectively closed the books on Waterfront design possibilities despite the fact that it was not really prepared to do so yet.

To accommodate the hotel Berenson sacrificed the proposed trade center building on Long Wharf and pre-empted the site. The BRA traded the foot of T Wharf, abutting this site, so that sufficient land would be available for all the affiliated function rooms. Whatever plans the designers had for rehabilitating the Quincy Cold Storage Building into a parking garage were dashed. The more consequential trade, however, involved a second parcel, at the foot of India Wharf, which was really part of the right-of-way of the existing Atlantic Avenue. Berenson’s wharf abutted the road. The amount of public land involved was not very much, but it was vital to both Berenson and his architect, for both had come to realize the futility of reconciling the India Wharf building program with the size of India Wharf. The additional land was ample enough for Pei to be able to place four apartment towers comfortably on India Wharf without incurring significant bulkheading expenses. The structures would have to rise higher than 25 stories, but a feasible plan in terms of all other important criteria looked promising. Building height was an arbitrary factor anyway, so it was still negotiable. Berenson would get the necessary additional property; thrown into the bargain was a change in BRA plans to permit Berenson the complete development of high-rise luxury apartments on the Waterfront. Rowe’s Wharf would be rebuilt as a larger and more elegant home for the yacht club that was currently occupying part of it.

The settlement of the role of Berenson’s land and money in the project clearly settled the Atlantic Avenue question at the same time, but by then only a handful of dissident
FIGURE 15. -- ILLUSTRATION OF THE FINAL PLAN FOR THE WATERFRONT, FEBRUARY 1964
voices was being raised in opposition to the proposed realignment. Bartering part of the existing right-of-way gave the City little alternative to committing itself to the new road, a dangerous position because of the dependence on the Department of Public Works and other agencies for approval and assistance. The new alignment's reliance on external decisions beyond the designers' control also presented staging problems. In most attempts to program the design proposals, parts of Atlantic Avenue and supporting circulation changes were considered necessary near the very beginning. The approvals and aid might take some time to negotiate. In sum, if the relocation of the road were a successful solution, it was a nerve-wracking one as well.

1964: Consummation

In the early weeks of 1964, the Urban Renewal Plan was ready. A few problems, especially in relocation, in reuses and in site design and controls, remained, and Pei, of course, was still in the early stages of his own little design process for the Berenson group. But the document was advanced enough so that the Downtown Waterfront Corporation could claim a fulfilled contract. At the beginning of February the Corporation submitted the $24-million plan and its report to Logue. The Board of the Redevelopment Authority gave

45 Circulation and priorities, the twin cores of the CBD design problem, were less central to the Waterfront design process. However, this does not mean they were outside the concern of decision-makers, merely that these factors did not seem to press in on them so overwhelmingly and continuously. Lynch, in reciting for the author his major reservations about the design as it was evolving, said he often worried if the circulation systems as proposed would really work well. (Interview, May 6, 1968.) Logue, we are told, ultimately came to regret the commitment to a new Atlantic Avenue under such fragile conditions, and knew at the time that the odds were against staging the implementation very smoothly. (Interview with Mr. Adler, of the BRA staff, March 21, 1968.)

it its blessing shortly thereafter and, after a public hearing in the spring, the Boston City Council approved it on the eighth of June. The Federal Government approved the Plan in August 1964.
Postscript

The sightseer who strolled into the Waterfront-Faneuil Hall Project area at the beginning of this case would, if it were 1968, see signs of change at the same time he was attempting to organize the environment and orient himself to it. He would doubtlessly be impressed by the aquarium substantially constructed at the far end of Central Wharf, a blue and gray, almost windowless box intended to conceal a whole new world of experiences within, and looking somewhat more ponderous and less brilliant than a "little jewel," that evocative analogy of earlier days. He would see --and hear-- the demolition of buildings nearby, paving the way for a couple of new major office buildings on State Street, among other things. There would be signs of actual wharf rehabilitation and new bulkheading between Central and India. People would appear to be living in the most unlikely places: dingy-looking old granite buildings on Long and Commercial Wharves; and an old industrial loft building on Atlantic Avenue that had been converted to residential use.

The observer would unsuspectingly view parts of the project where the BRA had hoped that by now he would also see signs of transition but where nothing seems to be happening. India Wharf sits as vacant of buildings as ever. Since 1964, the design for the Wharf has undergone many changes. I. M. Pei continued to search out the best living environment possible, in the face of the continuing struggle between his client and the BRA. By spring of 1964, the program had forced him to propose four towers at 30 stories each, but in August of that year, he was contemplating a pair of 40-story towers and a slab-type building 15 to 20 stories high. A year later, the plan became three 40 story towers close in to the foot of India Wharf. In 1966, Berenson cut back his program to 600 units and said he would build only two towers as a result. When it was finally admitted that no one knew the market, it was agreed that a third would be built at a later date when the
first two were half occupied. At this writing, construction on the first of these towers is imminent.

Most new private development (and rehabilitation) is imminent, for that matter, on the verge of inducing an almost overnight transformation of the Waterfront. What disappoints the BRA most, it seems, is that it cannot point out to our observer very many indications of the kind of public improvements which were supposed to be early and dramatic features of the new window on the world. Atlantic Avenue is still troublesome, despite some clearance in anticipation of the realignment. There are some problems of squeezing it in between the Central Artery and the existing building line to the east which may force the plan to abandon certain underartery development. There has also been a compromise that leaves the BRA less than satisfied:

One of the original goals of the Plan was the discontinuance of the Union Freight Railroad running along Atlantic Avenue. We have tried to get the UFRR to agree to discontinue its operations, but they would not do so. However, the UFRR has indicated that they will operate on only one track, instead of the present two. Furthermore, the City has the power to restrict the operations of the railroad, and accordingly, proposed operating restrictions are included in the Plan.47

While the BRA may not have achieved its goal of removing the railroad, it at least has settled the matter for now. The same cannot be said of the Central Artery ramps. Edward Logue's grim assessment of the situation a year ago is still current:

The most important unresolved issue in the Waterfront Project is the adjustments to ramps to the Central Artery as originally agreed to by the State Department of Public Works...Frankly, we have been disappointed in the Department of Public Works' response to our various proposals for improving the Central Artery.48

47 From the Summary Report to the Authority from the Downtown Waterfront Corporation, presented on February 8, 1964.

48 Edward J. Logue, Seven Years of Progress: A Final Report, August 4, 1967, p. 32. Note also that approvals from several key city agencies are likewise not yet assured.
There are other problems left over from the original design process, such as the continued lack of enthusiasm for the Sports Center, but these were all anticipated, and the BRA was prepared to deal aggressively with them from the outset of the implementation period, surprised, no doubt, that they could persist for four years or more. While the designers in our case had to have the patience of archeologists to pick their way through the problem, those now in charge may rightly develop the time sense of geologists in trying to knit together the solution. What is evident, however, is that most of the promises are definitely moving toward fulfillment, and the BRA seems very anxious to have our sightseer return to take another look four years from now.
CHAPTER FIVE

THE DESIGNER'S ENVIRONMENT: AN ANALYSIS OF EXTERNAL CONSTRAINTS ON GENERATING AND EVALUATING URBAN FORM ALTERNATIVES

The men who labored to prescribe policies and urge actions to effect change in two segments of the urban form of Boston engaged in processes whose physical outcomes will probably belong to the next generation. If state highway ramps and national defense budgets continue to share intractability, some of these outcomes may never be realized in quite the way the current generation intended. Not all the features of the design alternatives finally selected are in jeopardy, of course. Boston is assured of a bevy of modifications to street intersections, bulkheads, signalization systems, and sidewalk contours that seem inevitable anyway, simply in the interest of sententious goals like the maintenance of the public safety. But this is not to say that small favors are all that deliberate planning could grant in the case city. Boston is also assured of an aquarium on Central Wharf chiefly through the efforts of men engaged in a purposeful process of coming to grips with the waterfront's problems. But some of the other significant statements of policies and intended actions are in trouble, and the durability of proposals for malls, marinas, and the like remains questionable.

Naturally there are men trying to realize the intentions, making every attempt to add to the list of assurances Boston has about its future based on what the City originally was promised in the CBD and Waterfront processes. Failing this—and a certain amount of change in plans is inevitable—these men seek to assure the best alternatives. But not many
of these men will be enlisted from among those who participated in making the complicated choices initially, those who articulated the slate of promises now defying fulfillment.

Edward Logue is gone from Boston, to solve elsewhere the web of problems in creating quality environments. Samuel Mintz has his own firm now, as does Tunney Lee. Victor Gruen and his associates have long since departed for the San Antonios and Saginaws around the country that covet their services, and we are told that Theodore Berenson worries these days about more substantial investments than that which constitutes his waterfront commitment, entrusting the success of that venture to others.

While most key participants in these urban design processes have moved on and some, like Partan and Beatty, remain behind to carry out new assignments of interest to them in implementing the outcomes of these processes, all doubtlessly transport to their work recollections of the events and experiences we have tried to recount. Among these are impressions of the unique features without counterparts elsewhere that become part of an indelible transcript filed in the personal archives of the mind and retrieved in those moments when exceptions, rather than rules, seem better guides to action in new and equally unique situations. As for the rules, and the day-to-day activities of urban designing, each participant likewise has garnered impressions from these processes that serve to reinforce or modify their personal models of how designs come to be made, including expectations of how certain kinds of people might behave in making them. But there are not too many demands on our participants to communicate in any systematic way their perspectives on the urban design process. It proved difficult for some of our interviewees, when requested to order their images. The verbalization, the articulation, is not a necessary feature of the daily experience of practicing in the process. But the analyst, who postulates rather than produces, is obliged to order his impressions as an
integral feature of his own work. It is to this task we now turn.

**Diversity in Structure: A Comparison of the Cases**

No two adventures in urban designing are quite alike. Despite coincidences in geography, political culture, and some participants, the cases of the design of two adjacent pieces of Boston's downtown crescent share few other common characteristics. The vocabulary of roles suggested in Chapter One provides the idiom for expressing the essential differences here, insofar as the environmental context for problem solving is concerned.

If pressed into naming the outstanding difference between the respective social environments, we would have to point to the roles that Independents and, to a lesser extent, Custodians played in the Waterfront design process. No comparable place existed so consistently and with such impact during the years spent unraveling the problems of the Central Business District. Not that the CBD process was bereft of potential occupiers of autonomous positions, for private developers and historians had as much claim to participate in central city design decisions as they did in choices affecting development in the shadow of the Central Artery. Certainly the Transit Authority had keen interest in the development above its downtown labyrinth of trains and tunnels that easily matched its regard for the aged power plant at the foot of Union Wharf, but the agency chose mostly to sit in the audience in the former case while joining the cast of characters in the Waterfront process. Two features of CBD design account for the lassitude of outside agents in that process. From the viewpoint of this type of actor neither Gruen nor the BRA staff elected to manipulate design variables in ways that would have important and direct consequences for most of the key overlapping systems of design or, with the possible
exception of Spring Lane, would uproot the local cultural symbols or threaten large political fiefdoms. CBD design decisions on private land use stopped short of making the kind of policies that the private sector felt should emerge from their own design systems. And the BRA kept Gruen out of potential skirmishes with pressure groups by anticipating reactions to widening both Tremont and Arlington Streets around the burial ground and the Public Garden, and by eliminating out of hand both of these alternatives for improving the downtown circulation system. On matters dear to the hearts of those monitoring the process, the CBD designers were usually accommodating; what they could not control easily, they tended to avoid if possible.

Second, what they had to control they tried to do within their own system of design. The structure of the CBD design process operated to accommodate outsiders in other, more dependable roles, mostly as Private Clients. The Committee for the Central Business District, with its wide assortment of narrow self-interests, was really a collection of potential autonomous actors who chose instead to pursue common interests and assigned to Logue and his advisors the rights to develop and evaluate alternative statements of those interests on its behalf.

On the Waterfront a more aggressive and far-reaching design policy was in the making, one that required control of elements of urban form that other site planners and traffic planners, along with the Tillotsons and the Whitehills, never dreamed of relinquishing to Mintz and his team without a struggle. The buxom shape being given to design policies was partly a product of the assumptions under which the Waterfront designers began their work, but the assertive personalities of men like Mintz and his consultants was undoubtedly a factor in the persistence of the belief that the Waterfront needed a comprehensive reconstruction of its physical form. As we shall discuss later, under
different social circumstances these personalities may have fared even better than they actually did.

The Waterfront design process also had peculiar problems in filling the Client roles. For all practical purposes, the general role was destined for oblivion from the very beginning, for no one believed that the Chamber's bankroll made the metropolitan business community, de jure, a Client of the system. The wholesale produce industries quartered under the eaves of Mayor Quincy's market buildings were Clients whose sole purpose was to shed that role in the Waterfront process. Once resigned to the imminence of relocation, their definition of the problem made them clients in search of accommodations in some other design system. The unpredictable Aquarium Corporation saw the client role as a marriage of convenience, and withdrew from the system once it developed its sense of self-sufficiency. The typically ethereal Public Client remained a critical role that, just as typically, forced the designers to fill themselves. The CBD design process never suffered a comparative poverty of clients. Both private and public interests in the retail core found a small army of volunteer representatives ready to protect and promote them. In contrast the Waterfront was a haven for draft-dodgers.

The cases demonstrate the usefulness of distinguishing Clients from Decision-makers in the structure of the urban design process. Edward Logue and the CCBD were hardly in the same class most of the time when it came to holding the reins of decision-making in the design of the retail core, and Logue was clearly without counterpart among whatever weak clientele emerged in the design of the downtown shorefront. Boston's tough renewal chief never strayed far from the center of the decision-making arena in either case; no matter who occupied the role of Designer, he regarded Logue as the chief justice of design, the man who in the final analysis would choose among policy alternatives emerging
from these processes. Despite overtures Logue made to "public-private alliances", shared decision-making within the confines of the design system remained mostly an illusion in these cases. All Decision-makers are Clients to some extent, but not all Clients have the power, authority, and responsibility to make choices. Logue, inside these two design systems, was the man at the top.

He often found himself the man in the middle, too. Decision-makers of Logue's genre are typically men of style, owners of personal strategies temperamentally suited to the manner in which they like to face the decisions they have to make. Logue's operating style developed out of a very practical sense of politics. Respecting the political necessity in Boston of making alliances and citizen participation synonymous with an image of urban renewal, he had to give the appearance of sharing and delegating control while in reality maintaining most of it for himself. Thus, groups poorly equipped to exercise the decision-making functions but richly endowed with the public trust were Logue's favored partners in these joint ventures into urban redevelopment. Those among the chosen who recognized their importance in Logue's strategy could work it to their advantage simply by bargaining their credentials for a place of influence in the design process. The Chamber of Commerce never really cared enough about the Waterfront to make the effort, but the CCBD gradually moved into as close an alliance with Logue as was genuinely possible in Boston's revitalization program. Consequently, the usual rule in the middle and toward the end of the CBD design process was to influence the merchants to accept (or reject) design possibilities, and thereby gain an influence on Logue, a decision-maker somehow trapped by the subtlety of his own political strategy. Gruen especially tried to capitalize on Logue's need for CCBD support. Thus, not only was the role of the Private Client visibly occupied throughout the CBD design process, its incumbents shaped it into an
extremely significant one from time to time.

In coming to terms with him on the Waterfront, men dealt with Logue more directly as influence was more widely shared. There were no visible Clients in the system, which gave the BRA Administrator even more authority to govern unhindered. However, he was forced by circumstance to recognize limited responsibility for many critical decisions outside his control and resort to techniques of influence rather than direct social control when dealing with leading Independents like Berenson and the Department of Public Works. Compared with his role in the CBD, Logue the Decision-maker held greater power over fewer decisions in the Waterfront design process.

Each process had Managers, but Hazen clearly had a better basis on which to play out his role than either Ahern or Mintz, because of his personal association with Logue. Yet the same aggressiveness that characterized the technical side of the Waterfront process spilled over into its administration. Far too many desirable features of the urban designs for this area would be socially and politically unacceptable to Logue if the designers were not willing to seek directly the necessary coordination and cooperation from their social environment. Mintz had to work the process into a better competitive position relative to other systems of design vying for control over the form of the Waterfront. He had to deal with politicians and pressure groups himself because of Logue's usually acquiescent attitude toward outsiders in this case. Indeed, there was little about the Waterfront as a renewal project in those first shakedown years of the BRA in Boston that seemed to matter as much to Logue as the deference he should show toward all those with a stake in the project's outcome, those who, like the politicians, were capable of obstructing the renewal program in the more relevant projects in town where Logue really wanted to have a clear and unencumbered hand in making significant changes. The Waterfront was a pressure release valve; as much as he
could Logue wanted a socially acceptable document when the designers were finished. Mintz,
interested in much more, had to create for Logue an image of how social acceptance could be
molded through political means, even if it meant --as it did-- that Mintz would have to
become a persuasive and tireless politician to do it.

The structure of the urban design process has many modes, as our cases have shown. Roles
are there to be occupied and enacted, but there are few written instructions for potential
players. There is no reason, therefore, to expect the context to look the same in any two
cases, because workable administrative standards for structuring the social environment is
the environment's major non-existent attribute. Actual role playing is largely up to the
individual to determine for himself, once he settles on his part in the process, though we
suspect how one plays a role partially corresponds to the functional specifications of our
earlier model. The first really interesting question, however, concerns structure itself:
who occupies what role, and when in the process does he do so? It is true that people like
Myer, Gladstone, the CCBD, and others were assigned roles in the process more or less
corresponding with the types previously described, on the strength of the complexities of
the problem or for rationalizing the process. Yet people can demand roles, the way Crane
did, or simply assume them in the course of events, as Berenson did, based on the importance
of participating. Assignments can even be broken: Lee and Salvucci burst out of their roles
backstage in the CBD process in the interests of assuming other roles. Roles may be evaded,
too. Logue took little interest in serving the Waterfront designers during the first summer of
their engagement; the small entrepreneurs in the Garment District failed --perhaps out of
despair-- to take an active part in the CBD process (thereby forcing Lee to assume a role in
their behalf). Thus, role occupancy in the urban design process is governed by more than
job descriptions and the matching of people to positions. The BRA staff and Victor Gruen
Associates, in the CBD process, appeared for the most part to alternate in the same role—be it as Designer or Public Client—but it is not inconceivable that roles can be occupied simultaneously, as in the sometimes friendly competition between the Chamber's designers and its design consultants in the first months of the Waterfront process. Of course, none of this needs the mutual consent of the contending participants. Logue, of course, played at least two roles in each case, and Mintz could be found at one time or another functioning as Designer, Manager, Specialist (he became the team's expert on rehabilitation), and Public Client.

If norms, as we conventionally understand them, do not guide the way in which men occupy roles in the urban design process and thus fail the designer as a mechanism for predicting how the environment will structure itself in any given situation, then one must look instead for other determinants.

Some Significant Factors in Structuring the Environment for Design

The social environment of the urban designer is a flexible structure of roles with the capacity for interrelationships to vary from case to case and with a case over time. Constraints on resources aside, four general characteristics, all variables, can shape the character of the structure. Two are perceptions of a given role at a given time by participants in the process: its attractiveness as an instrument for achieving influence or control and its accessibility. Two are more closely identified with potential occupants themselves: their motivation to play the role, and their perception of ability to play the role. The two cases studied yield some insight into how and when these variables operate to form and reform the context in which the urban designers generated and evaluated their alternatives.
Motivation appears as the most generalizable of the four factors, so it is convenient to structure the analysis around it. One is motivated to play a role in the urban design process for several reasons, but especially if it is a necessary role that, because it is unattractive or inaccessible to its most able occupants, lacks an incumbent. Professional urban designers do this consistently in the chronic case of the Public Client, and usually with a compassionate bias toward the forgotten man on the street. People—the undifferentiated masses—use the environment all the time but never seem to enjoy the luxury of a formal and identifiable ombudsman. At best the Public Client is underrepresented or unevenly represented in the course of the urban design process. Custodians, those trustees of the general value system, are its natural spokesmen, but fail either to find a direct Client role attractive or accessible, or to joyously promote values as much as they jealously protect them, or to concern themselves with the public interest in all its manifestations, choosing instead the common man only as a lover of natural beauty, hater of sonic booms, devotee of history, or demander of safer streets as the primary and often fanatically exclusive emphasis of their efforts. But even with the coverage of the value system that Custodians can bring to the design process, much about the Public Client is left unsaid. We found no Association of American Mall Strollers or Society for the Promotion of Down-Harbor Viewing in our case studies.

The professional urban designer typically advocates for the users of his designs. Lee championed their cause in the CBD, as did Myer in his attempts to define Waterfront problems. It’s an easy role for the professional. As part of the public himself, he takes his ability for granted, and regards his place in this role as an obligation. Its accessibility is undeniable, for he can make the switch in roles implicitly in his own mental processes for evaluating his alternatives. But the designer may be no more accomplished an advocate than any other participant in the process, since there is little assurance that his view of the Public Client's
interests is correct. It was a view, in fact, that other men, even other designers, frequently challenged and debated in our cases.

One may also feel motivated to occupy a role on the perception of the inability of the incumbent for the part. The BRA staff emphatically distrusted the Gruen staff in its handling of CBD problems, partly out of an apprehension that the design consultants cared less for the user and small-business owner than they should, and partly because Gruen's team was not going to be held accountable for many of the consequences of their alternatives unless these consequences were impressed on Logue and the CCBD. But the Design role in the CBD process was generally inaccessible at first, restricted to Gruen by express agreement, if not quite by contract. It became more available as the process ground on, due in no small measure to the changing status of the BRA design staff, a matter to be discussed more fully in the next chapter.

A third motive to change or adopt a role depends on the Decision-maker and his expectations and perceptions of the importance of any role and it is assumed, by implication, its occupier. The relation to role attractiveness is evident. Most roles in the design process offer some attraction to participants in the process but never, it seems, with any consistency. Not even the role of Decision-maker is inherently seductive because of the responsibility that usually accompanies the authority vested in the position. It was sometimes better to move into an influential position relative to the man at the top than to challenge him for overt control. When the role was very attractive, as in the final decision on the future of Washington Street, it was often inaccessible to anybody but Logue, so there was little else to do but to move into positions of influence. Thus, the attractiveness of most other roles was often measured in terms of the extent to which its occupancy might increase a participant's potential to sway the Decision-maker and this,
of course, varied considerably.

Participants anxious to move into positions of influence with Logue found him ever the pragmatist and difficult to generalize about. In the Waterfront he was extremely responsive to Independents, a role structurally inaccessible to BRA and DWC designers. In the CBD he had to satisfy his Private Clients for strategic reasons, and that role became highly attractive, but also highly inaccessible to the designers. It would appear that the design strategy in both cases was similar, for Gruen's courtship with the CCBD—an indirect assault on Logue—was not unlike Mintz' vigorous interactions with certain Waterfront Independents in an effort to solicit their cooperation as a prerequisite to gaining Logue's backing.

The factors governing role-casting in the urban design environment admit at this time to only the grossest statement of relationships among them. They can vary independently and discontinuously, and while it is possible to say that a capable man highly motivated to enact an accessible and very attractive role will in all probability assume the role, not much has been added to the literature as a result. These stand as categories defined as significant rather than as understood variables. The point is that the environment for urban design appears capable of structuring itself to reflect at all times the external problem and the personal and social perceptions associated with it. As a result, it can be an environment of great opportunity for the right kinds of people.

Implications for Management

The opportunism inherent in the structure of the design process raises at least one interesting question, however. If attractiveness, accessibility, motivation, and ability are all very high for all roles and participants, then one can predict a highly fluid environment built around
very broad and unstable patterns of interaction, to the extent that the social environment may no longer have a recognizable structure but could become instead a confusing atmosphere in which to generate and evaluate alternatives. For example, there would be such a diffusion of power and authority that decision-making may break down altogether. The environment would be unmanageable and control would have to rely on implicit mutual adjustment among individuals, a not too predictable system. This extreme is unlikely but one must ask how much variability is permissible and desirable before the structure collapses. How far, from Management's point of view, should the attractiveness of roles be influenced by, say a system of rewards and penalties, and how far should the accessibility of roles be controlled through clearly differentiated and enforced division of responsibilities? To what extent should highly motivated and generally talented personnel be encouraged to enter the process? Or kept out of it?

There is no single answer to this question, but our perspective of the urban design process obliges us to offer a caveat, should the most conventional criterion for the deliberate structuring of the design process be suggested first. As we see it, management tends to emphasize the need for structures of great organizational efficiency, stressing, in the rhetoric of Jacques Barzun, "economy of matter and sufficiency of form", almost like works of art. This is not to say that efficiency is the only goal of management. Contemporary administrative theory is far too advanced to support that proposition any longer. But theory has outstripped the tools of management, and no matter the other criteria for structuring the relationships in a social environment efficiency remains the easiest to define, to attempt, and to transform into measures for evaluating the success of the effort at organizing. Perhaps for these reasons alone, efficiency remains the compelling ideal.
Devices for controlling and influencing the social environment in such circumstances cannot always rally participants to the cause of efficiency as traditionally conceived, however. Choosing the economical means for achieving some process objective places the Manager in the position of having to decide what is economical and what is not in situations where functions may be conceived in roles, but ability, responsibility, and power rest in individuals. Hazen and Logue, as Managers in the CBD process, never discouraged the BRA staff from assuming a central role in making alternatives, because its ability to develop different ideas outweighed the duplication of effort with Gruen’s staff. That Gruen continued in his efforts was attendant on his role in sanctifying the process for the sake of outward appearances, a more important consideration to Logue than any internal and messy duplication of functions. Not only can the process in real situations exhibit limited efficiency in the conventional sense but there are reasons that make it unlikely a normative model of urban designing would rank efficiency very highly anyway.

Other characteristics of the structure that eschew this goal appear more important to account for. Both the Central Business District and Waterfront design processes spawned policies and actions as much out of the spirit of conflict as of cooperation, and more than just a few of the clashes were inevitable. Conflict is a social process as much as it is a determinant of such processes and, as at least Logue knew, encouraging conflict could indeed reap special rewards in terms of overcoming obstacles in decision-making. Functional overlap among participants, both substantively and temporally, in these processes was very much a feature of the strong task orientation assumed therein. The exposition of ideas, the unanticipated emergence of issues, and many of the resolutions prefacing the design were the products of relatively broad and free interactions among interested participants, relative, that is, to a conventional organizational benchmark.
There is, to a significant extent, a welcome inevitability about otherwise discouraging and disreputable-sounding features of the urban design process that even prescriptions for the process and methods for analyzing it might embrace. To structure the process to maximize individual contributions and still manage the ensuing conflicts is tricky business, but it seems that less, rather than more differentiation among participants on a functional basis is the means for creating conditions under which such a system thrives. The less the differentiation, the broader the social interaction and, possibly, the motivation to play roles in difficult situations. The less the differentiation the less stable and regulated the expected patterns of relations of the role occupants to one another and, thus, the more opportunistic its flavor. The less the differentiation the more points of contact among patterns of activity and the chance for interchanges of ideas. The less the differentiation the greater the likelihood of functional overlap and the motivation for personal abilities to be tested and used. The less the differentiation, however, the less the efficiency of the process.  

1One analytical method, industrial dynamics, derives from the old belief that the behavior of an organization is principally caused by its structure, but that the better analytical framework rests with "tracing cause-and-effect chains through the relevant flow paths" rather than in viewing the structure in terms of separate functions. The object is to illuminate more clearly the sources of conflict and of suboptimization of resources. Recent shifts in the philosophy of industrial dynamics, however, have brought it closer to, rather than away from, typical functional considerations, in the recognition that there are intangible, non-quantifiable factors that are of greater consequence to the effective operation of organizations than those which the rigorous industrial dynamics models can capture. Hence a new focus in recent years on "the real decision structure of the organization", and on "modelling the dynamics of the power structure". Thus, while we have not drawn our sketches with an eye toward management systems philosophy, it appears as if we are dealing in similar problems. Rather than a conflict in approaches, we sense a convergence. (The quotations are from Roberts, E.B., "New Directions in Industrial Dynamics", in Industrial Management Review, Vol. 6, No. 1, Fall, 1964, pp. 5-14.)

2Depending, that is, on how one measures efficiency. Efficiency in group problem-solving processes might normally include the use of organizational devices to speed up the process, simply as a way of reducing running costs. Speeding up the process can be accomplished by increasing the number of acts of interaction per unit of time, i.e., the
The adaptability of the social environment to the problem at hand reflects both the needs of the participants to have a voice in solving design problems and the strategies of decision-making that stylists like Logue prefer to use. The extent to which the environment can be the target of deliberate adaptive organization is theoretically large. It might be possible for men to restructure their relationships continually and explicitly in light of the problem at hand. For generating ideas and for the fundamental bases of problem-solving hierarchical structures could dissolve into freely communicating bodies of equals. When it came time for conscious evaluation, formal searches for information, or the tests of ideas requiring higher degrees of rationality and social coordination, the environment could restructure itself along tighter lines, in more familiar organizational modes.

Adaptive structures, however, are not the easiest to achieve. There are the usual bureaucratic constraints for one thing. And others have pointed out the necessity for management to choose among goals and the difficulty of optimizing several goals within a single structure. The structure that produces efficiency in problem-solving and decision-making may be very different from that which provides the highest morale or satisfaction for participants. In turn, the most adaptive structure of the kind characteristic of urban design may prove to be very different from either of these.

rate of interaction. Among the propositions that social psychologists seem convinced of is that the lower the differentiation of the group, the lower the interaction rate of the group. Hence, a possible incursion on efficiency (see, for example, Borgatta and Bales, "Interaction of Individuals in Reconstituted Groups", in Hare, et al., eds., Small Groups: Studies in Social Interaction, Knopf, 1967, pp. 370-387).

Creativity, Rationality, and Social Acceptability: An Introduction

The diversity of structure reflects varying opportunities to occupy and change roles in the urban design process as functions of the problem and participant in question at any given time, but there are limits to mobility in the structure based on considerations, somewhat manageable, that we have concluded are significant. Actual role playing is likewise characteristically a product of the individual and the task to which he directs his efforts, but in the remainder of this chapter we shall argue that there are potential limits on the playing of the role in the process of most interest to us --the Designer role-- as a function of his general social situation, and independent of the individual, the specific problem at hand, or the specific variation of structure involved. The limits are implicit in generating and evaluating urban form alternatives and can be viewed, if one wishes, as role prescriptions, social norms intended to regulate the behavior of whomever occupies the role of the Designer. Of all the various ways to play that role, some are just more socially acceptable than others.

As we have noted, the problem-solving process through which the urban designer moves requires him to make critical decisions along the way. When men of different persuasions come together to solve urban design problems for reasons extending beyond technical or administrative considerations, the interaction invariably leads the designer to face new conflicts in goals, in choice of variables, and in priorities that add to his already heavy cognitive burden. These conflicts, and the choices the designer makes from among contending alternatives, are of special interest to everyone concerned because they mold the outcome of the process. What is a rational choice to one man may be totally irrational to another man for whom the consequences are a personal liability. Likewise one man's view of creativity may not match his neighbor's. But despite individual variations, the social environment as a whole has certain standards of rational and creative behavior on the part of its
Designer, simply because in many cases of conflict the choices are not clear and the consequences of any choice are often uncertain, and no one can honestly say what constitutes rational and creative action. When this happens, as happens often, men must fall back on whatever limited generalizations about action that they have, and rely on some acceptable measures to guide them in influencing and evaluating the work of the Designer on their behalf.

Politics is one machinery by which men make decisions they cannot make as individuals. It is the process through which men take issue with one another over the choices they must make, and through which they resolve their differences. Standards of performance used by the social environment in making design policy do much to reduce the issues in urban design, since they make possible a consensus in substantive areas where some rather nasty issues are quite likely to emerge. There is no doubt that urban designs get formulated because men can behave cooperatively in the process. Part of this cooperation must rest in perceptions by individuals that constraints —social and technical— are genuine, that limits on rational action are themselves rational. Without having to make the matter explicit, participants in the Waterfront process agreed on the political insanity of demolishing the Custom House Tower, though it was technically possible to do. There was no issue here, no politics to play, no strategies to devise.

And no reason, in this kind of study, to say much about it. We are not interested here in the objectivity of the urban design process when measured by the actions men take when they agree on what they will accept as genuinely rational constraints. The subjective reality incumbent on the process leads to its politics. Just as men may debate goals, means, and priorities based on their particular biases and views of rational action, so too may they debate constraints on problem solving. It is when the genuineness of constraints
imposed on him can be doubted by the urban designer that the problem-solving process begins to intrigue us. At this time, we shall identify and analyze a trio of general social constraints on the Designer that were visible in our cases and tended to be the focus of debate and strategy within the process. When the circumstances demand, these can be among the most formidable rules of the game for solving complex urban design problems.

**Compatibility**

The social environment presses the urban designer to resolve conflicts among goals and priorities with an eye toward the kinds of precedents he will set or challenge as a result. It is not that people oppose innovations in urban form. The Greater Boston Chamber of Commerce evidenced a clear interest in "bold" schemes for the Waterfront, and Logue himself was reported to be looking for "drama" in the reformation of the downtown coastline. If men contribute their time and energies to efforts at changing cities, they may gain more personal satisfaction and solicit public acknowledgment (if these are their motives) more handily the more evident or splendid the change might be. But if innovation requires bold departure from familiar definitions of the problem, or if it means indifference to decisions in other plans that, good or bad, have become accepted commitments to the goals of various client groups or simply matters of conventional wisdom, then the contributors to the process at hand are likely to have second thoughts about boldly different design criteria and alternatives. Urban form alternatives are measured not only in terms of how creatively and rationally they meet their specific objectives; they are evaluated in terms of how well they insulate those associated with their formation from charges of irresponsibility, insensitivity, and social deviance. Goals and a grasp of the problem,
as well as means, go on public trial whenever men broach urban form policies, and the jury, notoriously anxious to comment specifically on the technical content of policy—on means—for its connection to goals, tends also in the course of events to return its verdict on the goals themselves and the consequences for other goals or, in short, on the logic of the problem that was attacked.

The social environment that engages in charting a course into the future exposes its members to perils they do not often graciously accept. Fear of appearing abberant and inconsistent forces the course, no matter certain intrinsic considerations, to follow a socially and politically rigorous path. Path finding rather than path breaking is by far the safer behavior, and one simple and direct method of orientation is to demonstrate that the premises for new decisions and policies are compatible with some older or other ones.

Any of at least three reasons explains this tendency toward legitimizing future designs through finding secure bonds with previously condoned behavior. From a City's point of view, as mentioned in Chapter Two, a clean break with existing policies is often simply poor public relations. The act can be interpreted falsely as an admission that the local citizenry fails utterly to see its problems, or is confused, or that it cannot any longer pretend to solve what for years everyone has come to accept as its real problems and must now resort to solving, second-order, less meaningful problems instead. Like ideological solutions, there can be a tendency for perceptions of a problem to persist as the object of political idolatry. To restructure the problem by rearranging goals or to substitute another definition entirely, even if superbly better by technical standards, is a suspicious endeavor that any social system for design may honestly decide is not for them and may regard as outside the scope of its already trying and hazardous assignment.

Second, one must remember the political fragility of special-purpose programs for
fundamental physical change (like urban renewal) and, for that matter, the difficulties many Americans have in adjusting their philosophies to the whole idea of centralized planning in general. The political basis for planning is weak, the issues are often clouded by questions of race and class, and in a free market society it is easy to view planning as a restrictive, rather than positive, socio-political process. While it is necessary for planners to sever any connection whatsoever with the embarrassing spectre of West Ends and Central Arteries because they make planning seem irrational, some older and other plans, especially of the comprehensive, long-range genre, are not testable and never really will be, and tend to stand as the only testimony to their own rationality and success as a result. These plans are useful to have around. Where one's legitimacy is in question it is sometimes useful to be able to lean on one's relatives or ancestors, especially those with a durable reputation, for reinforcement and to claim that action consistent with one's respectable lineage is a proof of one's sensibilities.

Finally, no politically sensitive social environment, in times of stress, wants the buck to stop there. Where choosing courses of action is at best a risky business and mistakes can easily be made, participants in a process like urban design cannot be expected to want the blame should plans fail, so it is sometimes convenient to be able to pass it along to others. This requires that decision-making at least be compatible with that of some forerunner in substantive areas where reasonable room for uncertainty and high risk of error exist, and this could easily mean adopting at face value, regardless of their technical worth and unmindful of how rapidly physical problems in cities are changing, conclusions and value statements derived in earlier times or at other places as premises for those about to be developed at this time in this place.

For any or all of these reasons, the men who populate an environment around a designer
are likely to expect him to give very serious consideration in the choices he makes and his models of the problem to the comfort and reassurance he can build into an uncertain design process, by respecting the principle of compatibility as one of the criteria of rationality and creativity, and by adapting his own standards of a satisfactory professional performance to it. To a greater or lesser degree the designer can expect the men around him to be employing the standard themselves when evaluating his performance, even if he is not.

It is not terribly difficult to make the standard operational. At least three measures of consistency are useful, some plans even affording all three: a consistency through time, consistency with one's neighbors; and consistency in a hierarchy of plans. Ties through time with prior plans having something to do with the same area as does the focus of the current effort allow the current effort to be viewed as a state in a continuous design system, being a function of preceding states. The effort then becomes just another step along a predetermined course to physical change and has little responsibility for setting or changing the course. A General Plan for the Central Business District, that last largess of planning in the fifties, served as a prop for CBD designs in early stages of the process. This prior plan enjoyed considerable respect glossing over, of course, its more noticeable inadequacies. Among BRA staffers it was an object of ridicule, but scornful attitudes remained private and internal, never rising to the level of official public criticism. There were other restraining factors too, but there was no way of telling when the document might serve any of the three purposes, so there was no point in prematurely meting out verbal punishment of it. Outside the BRA, which is where it all mattered, the ancient policies were taken more seriously, when viewed as the result of long and proper (by any measure of rational problem-solving) investigations of a very complex array of problems. Thus the plan served immediately to set some of the premises on which new men could investigate the same area. In searching
for a reasonable image of the problem, its component parts, and the criteria it implied, participants in the process accepted among their general assumptions a commitment to view the Central Business District as a series of separate, linked nuclei of activities, a view identical to the one adopted by the earlier plan. Gruen was particularly anxious to see this one remnant of the old plan accepted by his clients because of the evident support it lent to the overall concept for downtown redesign that he was selling. Even at the BRA there wasn't much thought given at first to the possibility that there might be other images of the CBD with other design criteria implied that would render better service to the problem-solvers. Perhaps there are none, but the evidence seems to indicate that no one bothered to take a look. Later, adjustments were made to sub-area boundaries for the sake of the design possibilities emerging from the process, but the general goals for a nucleated division of downtown, consistent with the prevailing popular image, remained.

The prevailing axiom included a proposition that the area was in economic decline and, indeed, statistical evidence made for a lengthy supporting affidavit. But by 1961, with new census data at hand, the situation appeared to have worsened. The same goals for the urban form remained, and similar operational criteria guided designing. All that seemed to change in the interval between the end of one planning period and the beginning of the next on this continuum was the sense of urgency. All, that is, until Gruen presented his solution to the urgent problem.

The concept of compatibility may also apply in the case of the concurrent plans of other adjacent design systems, in the case of living relatives as well as ancestors. Here the city's public relations problem can center on its commitments to priorities. The Government Center plan was to be the feather in Logue's cap. It was begun sooner and was likely to be completed sooner—some thought it could be during this same city
administration—than any other project at the time that was totally identified with the BRA. It received special treatment, for the pre-election pledges of Mayor Collins depended for their first flush of vindication on Government Center and Logue's ability to carry out its planning and implementation smoothly and with certainty. Since many of the participants in that process would live to see the plan at work, it had to work.

Consequently, there were pressures on plans in Government Center's backyard, like the Waterfront, to be made compatible with Government Center design decisions in the areas of overlap. The "Four Corridor" objective for moving traffic through downtown clearly benefitted the melange of new government and private office buildings rooted in the rubble of Scollay Square, but in no way offered solace to Waterfront designers interested in as few reasonable constraints on their capacities to design as were absolutely necessary. The Waterfront's team ignored and eventually overcame pressures to resolve the conflict in favor of the more durable, more committed plan for the Government Center, but just from subsequent events the victory may be shortlived. The point is that it was certainly easier for Logue in comparing alternative traffic plans to regard the Waterfront as a breach in policy at a time when he needed to appear quite certain and confident of his other decisions, and to appear consistent in the manufacture of public policy.

In addition to pressures for compatibility with temporal and contiguous systems of design, the designer may discover that there are potentially strong ties with plans for the same area at the same time but at different levels in a hierarchy of scales. Aside from the local district plans that were central to our case studies, there were the efforts at setting policy at the regional and metropolitan levels, there was the BRA's battery of General Neighborhood Renewal Plans, there were functional plans for separate elements of Boston's infrastructure spanning the entire city, and, on the under side of the hierarchy,
there were countless episodes in private and public planning merely for buildings or blocks at a time. At least in one case, planners and urban designers are constrained by the letter of the law to be true to a higher plan in the hierarchy: in order to obtain Federal approval of renewal plans, local public agencies must state that the project plans "conform" with the general, overall, comprehensive, master, or what-have-you plan for the city. Often it is impossible or undesirable to comply strictly with the rule. But in most cases of urban renewal the requirement forces the makers of the smaller renewal plans to take a careful look at the proposals to windward, even if hopelessly unreal or out-dated, and seek or invent some reason for claiming conformity with them.

Even without social or legal pressures to respect the concept, normative planning technique can sanctify the hierarchic ideal. It is common to think of a chain of ends and means and sequential decision-making as the soul of complex problem-solving. If any form of socially acceptable consistency has both a philosophical and technical appeal to professional designers, it is in the hierarchical relationship of ends, means, plans, and problems. His sweeping plan for the Regional Core guided David Crane, at least, in the manner in which he saw conflicts in goals for the Waterfront best resolved, and Gruen, at a lesser and more direct level, saw no problem in justifying the fate of the Garment District as being consistent with goals for the entire downtown of which these several blocks full of mannequins and sewing machines was merely a small rusty cog.

In the act of generating alternatives, one gets into physical consequences of action rather rapidly and, thence, to questions of priorities in assessing these consequences. Placing one's problems and alternatives in a hierarchy of design systems has the advantage, should it prove useful, of letting someone else set some priorities by implication. It helps at times in arguing among consequences. Logue's designers ruefully discovered how much
it aided Gruen and his philosophy for solving design problems.

Before advancing too far in his career a professional designer may sense that predilections of his social environment for actions exhibiting consistency with some grand and irrefutable matrix of problems, plans, and processes can have strategic value for him as well. He may appeal to the standard as a means of resolving conflicts in his favor. David Crane used this ploy in part when resurrecting Pei's GNRP for the Waterfront, offering Logue a way out of the Atlantic Avenue dilemma by giving him an outwardly prestigious plan to fall back on. And proponents of a strong Summer Street axis in a reconstituted Central Business District included in their rallying cry allusions to its compatibility with the very same General Plan they were eager to dismantle in most every other respect. Designers often want genuine constraints on problem-setting, for reasons they, at least, find rational.

The argument here is that compatibility for its own sake can become a criterion for generating and evaluating urban form alternatives. Given the choices usually available in making the standard operational it can be a discretionary device allowing participants in the design process to select among possible ways of relating future policies to past and present ways that other men have exercised their policy-making prerogatives. This is assuming, of course, that the content of other plans, goals, and problem statements are of negligible consequence, that the results of other efforts are merely instruments in justifying the shape of the problems and opportunities at hand. But people can harbor sincere beliefs in the posture of other systems of design, and choose to be consistent with them out of a genuine appreciation of their technical efficacy. There were participants in the CBD process who, whether by logic or custom, were convinced that a nucleated conception of the Boston peninsula could in fact service the design process admirably. It was more than an idea in good currency. While Crane used Pei's plan instrumentally in the Waterfront
case, his own Regional Core studies were the object of a genuine allegiance.

Thus, appeals to decisions made well outside the immediate social environment are not necessarily exercises in political expedience, and this creates a fourth, and almost liturgical reason for expecting consistent action in cases of urban designing. The matrix of other images has positive substantive value and becomes useful and relevant information in an urban design process. It can make the process more efficient, save valuable time, and eliminate potential conflict situations, because it has recognized technical value independent of its social worth. Other plans represent someone else's word on very involved and often overwhelming physical design considerations and the designer can value them as social devices for dealing with purely technical problems. Designers want to reduce the uncertainties inherent in problem-solving just as much as their fellow participants do in this complex process, and in a very real sense the authors of other plans, while they may be nowhere visible in the process at hand, participate nevertheless through the records of their thoughts on the matter by providing technical assistance to the Designer. If it were not for the usual inability of these authors to "interact" in the process, we could have justified a role for them in the model presented in Chapter One.

Of course, designers can still choose to disagree with the background against which their problem solving is set, even where political expediency through this curious form of social etiquette is not the issue being debated. The designer may also discover members of his social environment, such as minority groups, are interested in achieving a technically acceptable design policy that deliberately flies in the face of conventional social standards, as a means of confronting and discouraging standard ways of thinking about a problem that have in the past turned out to yield solutions meaningless or detrimental to them. Engendering a debate over social constraints can be an objective of technical problem solving. In the
next chapter we shall discuss some of the factors that can affect the extent to which these
disagreements and disenchantments might possibly take root and offer designers and other
participants in the process opportunities to explore problems and possibilities based on closer
consideration of the situation at hand.

Certitude

It is easier to conceive of possible designs than to think of all the consequences of
implementing any one of them. The incumbent Designer may experience untold oppor-
tunities for innovation in urban form, or he may find his environment throttling his
ambitions, but the true test of his ability to create poetry in design rests in his capacity
to generate alternatives when working with less than the full catalog of variables under
his control. Some features of the physical environment are beyond his reach for political,
economic, or cultural reasons, and these "sacred cows" can vary from project to project
or with changing problem perceptions, such as in the case of the Old South Building on
Washington Street in Boston's CBD. But not all remaining components of urban areas are
"fatted calves" for the designer, because the men who come together to help and encourage
him in solving the problems of cities are men who are usually accustomed to seeing these
problems solved in certain ways. Moreover, they tend to like or at least feel comfortable
with what they are used to seeing manipulated in the form of cities, are accustomed to
certain kinds of manipulations, and often "know a good thing when they see it" long before
the designer is similarly convinced. Although the designer theoretically has the latitude
to control all features minus the explicit constraints of the situation at hand, he often finds
that implicit rules exist that separate proposals for physical change into those which are
socially acceptable and those that are not, no matter the specific situation. Where the
element of urban form is not customarily known as a variable, the consequences of manipulating it are probably not satisfactorily known either. Consequently, an environment that is already concerned about deviating too violently in the kinds of goals it pursues and in its images of reality can also be a system that would expect its designers to avoid unfamiliar physical variables when faced with choosing among means, to favor known entities over unproven and untried "experiments" in pursuit of city planning objectives, and to pounce on partial alternatives and wrest their further manipulation from the designer's control prematurely. There is a tendency for the same form qualities, the same means, to be used over and over again.

In both our cases, where the focus was on public design systems, there were implicit limits on the rights of urban designers to mold activity patterns in the physical environment, limits narrower than those circumscribing their freedom over actual physical forms. In part it seems a philosophical constraint that carefully defines the province of the design system as well as trepidation at the thought of taking what could be irresponsible and avoidable risks. The laissez-faire ethic operates to sustain the prerogative of the private sector to make its own mistakes. The market specifies the details of how private property shall be used and, in its haphazard way, assigns the right of choice among men and enterprises competing for it. In the CBD we noted that designers could easily move within striking distance of control over activity through their opportunities to specify broad classes of permitted land uses. But to prescribe the performance of a use in terms of variables like hours of operation, permissible levels of human activity, uniqueness of activity, pulse of activity, rate of change in the public display of merchandise, and mode of operation was typically out of the question. Similar limits veiled the Waterfront process, where attempts to regulate activity patterns as a means of building "diversity" into that sagging environment met with
some difficulty. In the case of the wharves the objective eventually would have to be achieved through outright separation of these tattered reminders of a once prosperous harbor from one another, with the hope that some undetermined character distinctions would emerge in some undetermined way. As far as it went it was a safe bet, but it went only so far as the grossest patterning principles available to designers could carry the idea. The designers' control fell short of their ambition, for social as well as technical reasons.

The movement and behavior of the Public Client in public places is also of extraordinary interest to his professional surrogates. Urban designers intent on maximizing human encounters with one another, with their artifacts, and with Mother Nature often find their own social environment—Public Clients all—unfamiliar with the full range of means for controlling people and personal space to improve social and personal well-being. For example, despite the undistinguished experience of the post-war subdivisions, there is still a tendency to regard channels for movement as successful when they afford swift, unencumbered, and direct connection between points and not to regard the line between points as importantly as most professional designers have come to in recent years. There is little certainty that conscious manipulation of sequential driving and walking experiences are of any value, or whether the value is so intangible as to be incapable of being ranked among all other consequences of realigning roads, changing paving materials, varying road and sidewalk elevations, or controlling the heights of buildings within the vista. Maintaining Atlantic Avenue as a straight route was easier to justify than putting some kinks into it, even if the realignment facilitated land assemblage on its outboard flank. And by the standards of both Logue and the Aquarium Corporation, the visual criteria of the DWC

4 Mumford criticizes as "absurd" the American belief that rapid and easy movement is a prime ingredient of the good life (The City in History, Harcourt, Brace, and World, 1961).
designers were a weak basis on which to defend their siting of the proposed aquarium structure on Central Wharf.

Fighting the aesthetic battles need not always mean defeat for the urban designer, but it will mean he may have to work hard for his victory. If he chooses to confront the issue squarely and argue for manipulating elements of the urban form for visual reasons alone, his strategy might well demand he exercise extreme care to avoid raising consequences of his alternatives he may consider irrelevant but that his social environment might use against him. Where he draws the line in outlining to his environment the consequences of action is a sensitive question, depending as much on his own ethics as the particular environment or alternative involved. If he chooses not to trumpet his motives, his choice is either to abandon the design possibilities altogether or to mask those motives he alone regards as proper by searching out and substituting more socially or politically acceptable motives that his designs also serve. This subversive strategy, of course, is similar to those the designer might have to use in the face of express or implied parochial limits on, say, achieving school integration, perhaps choosing to conceal the real effects or potentials of his alternatives where he believes they are more principled or equitable for the larger society than those his immediate environment cares to consider.

One of the more interesting features of the urban design process is the interplay that develops between cognitive and social constraints. For example, it is possible for social limits on action to be born out of the social situation but to feed and multiply on the technical inadequacies of the problem-solving process. Designers know how crude their mental processes are for the task of solving urban design problems and they devise strategies for reducing cognitive strain, strategies that seem so inbred and customary that they resemble little more than conceptual habits. This is not the place for an
extended analysis of the pitfalls associated with the range of technical shortcuts that designers typically are forced to employ, but no analysis of social certitude is complete without noting some of the ways designers themselves may be unwittingly contributing to its propagation. Two common examples are in order.

One popular cognitive strategy used by urban designers where large geographic areas are concerned is to factor the problem into reasonably independent parts and then to solve for partial solutions until a total alternative emerges. It is equally common that partial solutions develop unevenly. Some answers come easier, information is more accessible concerning one sub-area than another, or issues among participants are easier to resolve at certain places than at others. In these circumstances, designers may prefer to keep prematurely developed portions of an alternative flexible, so that --because true independence is impossible and information and constraints may change over time-- they can feel free to reconsider design possibilities in case they have to at some unforeseen time later in the process.

The environment, however, may regard fluid alternatives with disinterest. Once decisions are made that set certain features of design policy they are sometimes difficult to reverse, and tend to lock into place, so that instead of finding himself with his options open, the Designer finds that in generating partial alternatives he is likely to be generating new constraints on subsequent problem-solving at the same time. The plan for Early Land Acquisition in the Central Business District was a partial solution to the entire design problem and it effectively constrained Gruen's team from considering further certain possibilities in the vehicular and pedestrian circulation system. The draft Urban Renewal plan similarly locked features of design policy into place well before the designers were ready.
The prematurity of designs may reflect a number of things including the need for certainty about a solution. Once acceptable means to partial goals are discovered, especially if the costs of the search are high, men may be unwilling to break their hold on them. Designers are as guilty as anyone, as the Chamber's staff demonstrated after its first confrontation with Logue, where the team had difficulty in disposing of their broad concepts for the Waterfront despite the evident displeasure of the BRA Administrator with their consequences. Adjustments in technical and administrative strategy seem important where the environment's need for certainty outweighs the desirability of maintaining flexibility in the uneven development of designs. The order in which designers solve partial problems may become strategic here, as might the way time and human resources are allocated among sub-problems. 5

Second, the environment's needs for certitude about what the variables of urban form can do for their problems extends beyond being able to comprehend the environment in fact to being able to understand its symbolic analogues, because participants must study and evaluate design possibilities that are presented as verbal and graphic images of reality. The primary scale of urban design is an unfamiliar one, for both designers and the members of their environment, and not many people have experience communicating and assessing ideas at the broad levels of community scale. There are few technical devices available for this. People, therefore, are used to working with elements familiar to site planning scales at best, and illustrations of urban form policies are little more than gigantic site plans. But such illustrations are easily understood and consequences more rapidly assessed. To the

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5 Christopher Jones advocates a strategy of minimizing non-cumulative time spent generating solutions in cases where there is high cost attached to altering or abandoning solutions on which much time has been spent. This strategy is aimed at simultaneous optimization of design, design time, and design costs, and is discussed further in Jones and Thornley, eds., Conference on Design Methods (Proceedings), New York, Pergamon Press, 1963.
extent that these available means for communication regulate what men may talk about, they are an implied and indirect constraint on the means men view for solving the real problems themselves. Site plans communicate how designers manipulate spaces between forms, the horizontal shapes of buildings, their orientation to sun and view, certain physical textures, street widths, and so on. They omit the dynamic quality of the city almost entirely and usually fail to communicate patterns or densities of settlement or activity. Thus, the need for designers to be able to interact intelligibly with their social environment can shape the ways they solve problems and, indeed, perceptions of the problems themselves. That designers often feel comfortable at this middle-range scale is simply the additional psychological handicap on their own creative processes.

To advance the proposition that people lobby for certitude even if it imposes limits on rationality and creativity is not to say that they sponsor a simplistic approach to solving urban design problems. Variables do not normally function in isolation, but in systems. While general understanding of systems is low, people can build up conceptions of the ways that cities work and, just as the designer must do, predict the effect of change in one variable upon the system as a whole. But images can be incorrect or blurred enough in parts to generate debate. Yet these conceptions can persist as conventional wisdoms, and the bonds among their component variables become very strong, to the point where the designer cannot only expect pressure to choose certain variables over others but to manipulate one as an automatic consequence of operating on another. Abandoning Washington Street as a component of the vehicular circulation system is a case in point. It was almost by reflex that the participants in the process regarded the by-pass road as necessary if Washington Street went pedestrian, and the BRA Design Department was clearly on precarious footing in making a motion to deal with the Mall as a separate item. Really
at stake was a choice between alternative predictive models, those handmaidens of quality urban designing. Social certitude, in the last analysis, has little to do with the variables themselves. It is an implicit principle of gauging the performance of the process based on reducing to a minimum the number of fragile points in predictive models, not be devoting resources to building better models but, more simply, by reducing the number and range of manipulations to those conveniently congruent with more or less existing, or conventional, or otherwise stable ways of predicting the consequences of alternatives.

For this reason certitude need not imply conservatism either, nor limit alternatives to those requiring only incremental changes. The Waterfront designers discovered that the desire for some certainty in design could bring with it a confidence in what might by similar standards in other places or at different times be considered risky means of securing planning objectives. Boston's long history of adroitly pushing back the invading sea has made ambitious landfill proposals fairly routine reading in local papers. The social and political consequences of such projects are still unpredictable, but Boston seems to convey a confident optimism about its capacity to survive in the face of all but the worst catastrophe associated with using this means of facilitating local physical growth and development. It was consistent with the city's experience for the Waterfront designers to consider refitting the profile of the meeting of land and sea. That they were unable to act on their early studies was, of course, a product of another constraint: now, in the latter half of the twentieth century, the city itself rather than private agents would in all probability have to finance manipulations of the land profile.

Social limits on the character and amount of physical change are devices that can serve some useful technical purposes in the urban design process, and their benevolence should not be understressed. External constraints ease the Designer's job by clarifying the
problem he is expected to solve. Constraints form a corner of his picture of the outside world, be they situational or, as we discuss here, general limits on creating and examining design alternatives, and whether he regards them as rational or not, at least the designer must recognize their value in expediting his effort. That he may refuse to accept them for other reasons is entirely another matter.

Credibility

One of the most difficult tasks befalling the urban designer is transforming the goals of the process into explicit and useful criteria for comparing alternatives. The task is made more troublesome by the expectation that he develop creditable and non-controversial measures regardless of his own perception of their efficacy.

Criteria are operational statements of goals in the sense that (1) they reduce the general goal statements to points where tangible physical consequences in a particular case can be brought into view, and (2) they are specified measures of qualities of the original goal statements that can be used like rules or standards against which alternative physical possibilities can be compared and tested to discover which, if any, "best" satisfies the general goal statements. Obviously, urban designing does not admit to the simple development and transformation of criteria. Even if the hurdles inherent in making operational statements at any step in the process of erecting and destroying alternatives is possible, the measurement problem usually remains when one must compare complex alternatives to see which comes closest to fulfilling an agenda of dreams.

Operations used in making measurements are of two kinds: instrumental and symbolic. If a piece of string is said to be "longer" than another when the operation of stretching each along a scaled ruler shows that the first string passes more increments on the ruler
than the second, the operation is instrumental because it employed a standard
device that permitted direct and unambiguous testing and observation. Designers
aren't fortunate enough to have many instrumental operations in their bag of
techniques, and where they do -- take the case of a pedestrian cordon count to
determine whether more parking garages will attract more shoppers to the Boston CBD
than improved transit service -- they are often applicable only after the fact, that
is, after one system or the other is irrevocably improved at very great cost.

Symbolic operations, such as mathematical techniques, logical inference,
verbalizations, and pictorial or diagrammatic analyses are much more character-
istic of the urban design process than are instrumental procedures, and some, like
the quantitative methods, are only in their infancy. And it is also characteristic
of complex design in a social situation that almost as many issues can focus on the
choice of appropriate operational procedure as can on the choice of goals and
criteria themselves. The almost divisive wrangle between the Urban Design and
Transportation departments at the BRA involved as much conflict over how to
measure the effectiveness of alternatives as it did over the complicated business of
setting goals for the downtown business area.

The social environment for urban design expresses preferences in the way such
conflicts are resolved. It prefers instrumental to symbolic operations, we suspect,
but since it rarely has this basic choice and since the designer would no doubt
prefer to evaluate alternatives instrumentally too, the issue is uncommon.

Differences in symbolic measurement techniques are more to the point. There is, to
begin with, a predilection for quantitative measures. The magic of numbers lies not
so much in the precision, infallibility, or finality of the counting game as much as
it does in the confidence it gives men when the public summons them to an auditing of their decisions. Appearances are important. In a business where rational action has inherent limits and can fail to measure up to broad tests of its ability to deal with a complicated problem or with looser models of both the present and the future, it is better to be narrowly rational and to focus on the precision and the internal consistency of the decision process instead, even if a narrower outlook has to be taken. A logic that does this is a logic adapted to the temperament of the political process but not necessarily geared to attaining technical quality in the urban design process. BRA designers interviewed in the course of the case studies were quick to note their own feelings of disadvantage when having to deal with the agency's engineering staff, because the designers lacked the proper symbolic methods to take issue with slide rules. Slide rules, like computers, can deal with quantifiable variables only. Designers carry biases into the process that are presumed to mitigate against the use of systematic and rigorous analyses in favor of impressionistic and intuitive judgements about the connection of plans to goals, but if this is an indictment of the way they solve complex problems, it overstates the prosecution's case. Both Lee and Partan, in turn, faced the task of disproving the quality of alternatives created by Victor Gruen. With Salvucci's help, Lee was able to build a calculated criticism of the Interim Report that relied as much on quantitative analysis as possible, adeptly employing technical arguments as a device for spawning and furthering social ones. Why he chose this strategy is a matter for discussion in the next chapter. Partan was faced with a more monumental task in his attempts to get a reconsideration of alternatives later in the CBD process, for the designs were less fluid, the data endowed with
greater reverence, and Partan himself was a relative stranger to the proceedings as far as the veterans of the process were concerned. The technical arguments had all been resolved and had long since made the designs, now a question of priorities, socially creditable. Partan's strategy never ignored the weight of these arguments nor the need for rebuttals to avoid direct appeals to a broader qualitative rationality, because he could not devise a socially acceptable substantiation of the stand he wished to take. He had to carry his case to the engineers instead, and impress them with the weaknesses of their analyses by persuading them of the significance of the aspects of the problem their quantitative techniques forced them to avoid. In other words, he had to reduce the credibility of their analyses as a device for increasing the social relevance of his. Almost a year went by before Partan was able to convince other participants of their ability to maintain a reasonable external justification for reshaping the plan, during which time he marshalled influence for his ultimate confrontation with Logue. By the time Partan was ready, however, Logue was playing another kind of ball game.

When it is impossible to show that an alternative is quantitatively superior to another, or that highly precise standards are not so creditable as they appear at first blush, a qualitative standard that is visible, commonly interpreted, or generally accepted is socially preferred to one that is not. This reduces controversy and aids the social environment in appearing faithfully in touch with reality, even if the standard is not so pertinent as one without these characteristics might be.

The Waterfront participants had the problem of deciding what measure operationally governed a comparison of alternatives for their effectiveness in achieving a goal of communicating the historical significance of that area. A
logical standard involved setting criteria for the choice of structures to remain, the degree to which they would be restored and given prominence in the environment, and the nature and extent to which historical events or physical forms no longer existing would be symbolically communicated in the revised area. Perceptions of an acceptable standard varied widely, however. It was imperative, according to the historians, for the BRA to maximize all features of the area's historical celebrity in as faithful a way as possible. For the designers a lesser measure of success than that one was appropriate enough, but it still involved a design policy more far-reaching than that which the purchasers of urban form, embodied in Logue, would consider as acceptable. The overall goal obviously was not at issue, but with cost as a parameter here, Logue felt it unnecessary to replicate history in the Waterfront, and that it was acceptable to rehabilitate just enough of the physical form so that historical continuity could be implied in the environment. Logue obviously had no simple set of priorities to play with here. He had to compare restoration and costs at the margin before he could make a decision. In assigning a bias to the latter while fulfilling a commitment to the former, he had to lower his level of satisfaction in achieving restoration to a point where he judged he had done enough to satisfy the historical pride of his cost-conscious audience by setting a standard for evaluating alternatives that centered on the more popular themes of history than a complete recording of it.

Invisible or abstract standards also present problems in justification at times. Gruen proposed that alternatives for the CBD be compared to find the one that best restored "levels of vitality" to the area consistent with its true economic capabilities. The best technical measure, according to the design consultant, was some point in
the past history of downtown when it was at the zenith of its economic viability, frolicking in its finest hour. But there is something uncomfortable about reaching into a past not too many people remember clearly to chart a course into a future that not many can conceive clearly either. The past is not tangible, so the measure is hardly one capable of common interpretation. Moreover, were things really so good in the old days, when sixty year old photographs show congestion in downtown streets to have been worse, sometimes, than in the contemporary city? Besides, times had changed and reaching for optima in a world of suburbs and shopping centers had an unreal -- and expensive -- sound to it. CBD businesses had long since given up hoping for nine out of every ten dollars of disposable income and would gladly settle for three or four, on good days.

But the real problem was not the unreality of the measure, it was the idea of it. One interviewer felt the CCBD was incapable of visualizing what historical levels of the economy looked like, and would have been incapable of translating the statistics, into a visual image even if they had been researched. Additionally, how were the Committeeemen going to justify that kind of a standard when all they had to do was look at the larger shopping centers in the metropolitan area to see first hand what high levels of vitality really looked like today and, at the same time, perhaps see how they were achieved?

**Summary**

This chapter has centered on identifying and analyzing some of the typical difficulties in solving urban design problems that are products of the social context in which the designer operates. The empirical data suggested that much of what
the designers in our two cases experienced in the way of social influence could be analyzed into three roughly distinct categories of constraints. We found, first of all, that designers may be restrained in the very manner in which they view problems to be solved and the criteria implicit therein, by factors external to the design process at hand that derive from more general social and political needs for systems of design to maintain an acceptable level of compatibility with the way related systems have come to think about similar problems and the objectives that urban form should serve. Second, there seems to be enough evidence in our cases to support the thesis that the range of design possibilities open to exploration by the designer has social limits too, limits deriving from the need for a variety of reasons unrelated to the specific problem) for the social environment to feel comfortable about the consequences of the means for achieving planning goals. Implicit rules exist that separate proposals for physical change into those which are socially acceptable and those that are not. Additional evidence indicates that the measure of social acceptability may vary considerably, as a function of what variables of the urban form people in a place are accustomed to seeing manipulated. Thus, while it may be fair to state that traditional means are preferred in most situations, there is no absolute measure of conventionality: what is traditional in one place may be highly radical or irrational in another. Third, within the already narrow range of techniques for symbolically demonstrating the efficacy of an alternative and comparing it with others for its success in meeting the given goals, measures of a socially justifiable kind are preferred by the men who have to live with the choices they make, even though more technically rational measures can be conceived.
It is evident that there is some overlap among these categories, some conceptual imprecisions that expose the approximate character of the analysis. Two case studies have helped carve out some generalizations in a systematic way, but are insufficient to fuel the effort much further. The analysis needs refining, and more data and time seem to be the keys to elaborating this first approximation. But while it may be of intellectual value to eliminate the conceptual overlap among classes of social constraints, it would be of real value to pursue further the apparent overlap and relation between social and technical constraints on the urban design process in real situations that we touched upon at various points in our analysis.

The scope of this study stops short of this in its emphasis on investigating social limits by themselves, and this is an inquiry not yet completed. Still at issue is the question of rational versus non-rational social constraints on problem solving and what might govern strategy for dealing with situations where the urban designer chooses to debate the rationality of employing criteria of compatibility, certitude, and social credibility in generating and evaluating urban form alternatives.

The Options

Members of the social environment with concerns beyond the design problem at hand would probably take the position that these and perhaps some other general constraints that fail to show in only two case studies are sensible and very real, and any urban designer effectively generating and evaluating alternatives within these limits is himself behaving quite rationally and creatively. He has performed under appropriate conditions and, in the view of his Clients, Decision-makers,
and others, is successful in his role in setting urban form policies. The professional designer could rest comfortably in this judgement. He could regard expediency as a social condition of earning one's keep and gaining a decent reputation for knowing where and how to adapt in a process that, after all, is nothing more than a sequence of adjustments and compromises among competing and contradictory interests. It is when he begins to question, in his terms, the efficacy of his own role playing in this social envelope that he creates his options. When he believes the constraints implied by his social environment to be excessive he must make his own assessment of what constitutes sensible and ethical procedure in resolving what now may become a fundamental conflict between socially and personally acceptable measures of rationality and creativity.

At the extreme he can quit the process, should he refuse to be socially conditioned. The role, in our terminology, has become unattractive to him. This really solves nothing for, if we are correct in our assumption that these certain constraints are ubiquitous, he will only have to confront them again in another place at another time. Sooner or later, the designer must face his options again, and the choice will involve strategies only in the case of staying with the process.

In this case he can accept the operating conditions when they appear if he wants to. Certainly it is easier to avoid conflict and act in a purely technical capacity if this is what his social environment expects from him. The environmental constraints, in rationalizing this option, are assumed to be real and unalterable. If it holds that urban designers act rationally by adapting to the environment's expectations, then this chapter, with its emphasis on the persuasiveness of socially acceptable design, closes the book on the matter.
Which leaves unexplained why some urban designs exhibit uncommon solutions to uncommon problems in common circumstances, why Victor Gruen could promote grand planning for as long as he did, why some unusual alternatives for the CBD could emerge, including Chauncy-Arch, when others like Avery Street could not, why the Waterfront designers could promote for so long uncommon goals for the comfort and convenience of users of the area and uncommon measures of the success of their plans, why men will expend the time and effort to try to surmount insurmountable social limits, or, more importantly why they sometimes succeed and sometimes fail.

Our proposition is that the constraints we described are not unwavering, but will vary depending on certain characteristics of the social environment and the designer's relation to it, and that any strategy on the part of the professional designer aimed at being more than politically effective and socially expedient in generating and evaluating urban form alternatives would have to account for these characteristics along the way. So another chapter follows dedicated, it seems, to the search for a third option.
Compatibility, certitude, and credibility are three implicit criteria for solving urban design problems independent of the specific nature of the problem. They are general external constraints on rationality and creativity that are intended to insure politically and socially satisfactory patterns of action by prescribing the role of the urban designer in certain decision situations. These are not absolute constraints in the sense that they will apply equally in all cases of generating and evaluating urban form. On the other hand, they will not apply randomly either but will appear as functions of certain characteristics of the social environment in which the designer works and of his relationship to that environment. Therefore, as this final chapter will suggest, it is possible to predict the potential weight of these criteria in the design process in a given situation where the characteristic parameters can be identified and analyzed.

The relevant features are all variables: the status of the designer in his social environment, the relative importance of the design problem in a given universe of problems, the relation of the social environment to its reference groups, the time horizons of proposed policies and actions, and the resources of the social environment. These features are likely to be interrelated, though they are capable of varying independently of one another. None, we expect, fully determines any of our criteria of social acceptability by itself, though some would seem more important for certain
constraints and for certain kinds of design problems than for others.

At this point evidence from only two cases becomes more suggestive than conclusive, so this chapter advances propositions admittedly in need of more confirmation than we can offer from our knowledge of a pair of processes in the Boston renewal program. There are also some unanswered questions raised in the following pages that imply additional research. But the basic relationships seem plausible enough to us that they are worth advancing despite some guesses and gaps that necessarily appear at the same time.

The Status Game

The urban designer's status in his social environment is a primary factor in assessing his potential effectiveness in dealing with the general external constraints on his problem-solving activities. The higher his status in the eyes of those concerned with making policy externally consistent, reassuringly certain, and socially creditable regardless of the problem at hand, the more likely the trust they will place in him to produce successfully even though he may abrogate the rules in the course of it. A designer of status, all other things being equal, is likely to be given the benefit of the doubt in those many doubtful situations where the implicit standards are normally employed. He is, therefore, a standard-setter himself.

If our cases are reasonably representative, professional designers practicing in this country certainly could not make much of a living off the status inherent in the Designer role itself in any process. To many other participants the role is technical, simply a bundle of functions that mark the functionary as another breed of Specialist. Worse yet, many other Specialist roles have inherent status, simply because engineers, even economists, ply their trades with a mathematical precision that is
extremely comforting to men concerned about giving creditable performances. Thus, even those designers content to be perceived as technicians in the urban design process would find it difficult to be considered as one among equals. Moreover, the role of Designer is among the few "Specialist" roles we saw in our cases where men without requisite training and experience could feel at least partly confident in occupying, if even to broach and analyze a single small idea. Like criticizing art or taking photographs, anyone can feel privileged to generate and evaluate urban form policies, but not quite anyone might be up to the task of determining bulkheading costs or predicting future traffic volumes. The self-perceived ability to play the key role in generating and evaluating alternatives tends, we think, to be rather high.

Finally, even where the role might achieve parity among the array of technical assistance roles, the Specialist role as a whole might not have high status relative to other roles in the social environment of the design process. Logue, the Decision-maker, tended to use Specialists strategically but warily, preferring at times to trust to the intuitive wisdom of his clients than the reasoned calculation of his experts, as in the case of economist Gladstone and his projections for the future of retailing in downtown Boston. There is not much guaranteed hope, no matter the viewpoint, for status-seekers in the design process to cast their lot with the role of idea-man and hope for some intrinsic status to rub off on them.

Status is more likely to be an import into the process for most urban designers. Sometimes it can be a product of the social and political circumstances attending the birth of the role in a given case. Logue was consistently embroiled in difficult situations of his own manufacture in his attempts to involve responsible Bostonians in his plans for revitalizing their community. Enlisting the Chamber of Commerce's
money and credentials in the effort on the Waterfront, and depending mightily on
the Chamber's energies in relocating the old markets, cost the Development
Administrator some of his control over the design process at first, for the Chamber
created a role for designers that it believed was important and on which it placed a
good deal of value. Logue could only accept the status bestowed by the Chamber
on its design team because he could not risk alienating the Chamber at that time.
The ultimate demise of the Chamber, as it became a more compliant party in the
process and identified less with its designers, was somewhat reflected in the increased
vulnerability of Mintz' group, but a residue of status-by-indirection remained and,
according to some BRA staffers, did much to influence key decisions on T Wharf and
Atlantic Avenue. In neither of these instances of decision-making, it should be
remembered, did the choices greatly reflect the influence of social constraints.

Local circumstances can also infer status on an independent system of designers
who are overlapping a given system simply because of possible differences in the
relative importance of the two systems. This is better discussed in the next section,
however.

About the only reliable and easy way for professional designers to gain status in
their social environments is to bring it with them to the urban design process. Logue
knew this as well as most designers do, and his efforts to hire Victor Gruen for the CBD
and to garner the services of I. M. Pei at the initiation of serious Waterfront designing
are indicative of his discrimination between professionals who have it, and those who
don't. Logue needed men of repute to lend stature and glamour to his fledgling
renewal program, and men closely identified with excellent design might lend quality
to the program as well. Victor Gruen moved into town with all the accepted symbols
of status -- professional awards, exposure in the popular media, prestige contracts, a sizeable firm, authorship, experience in the problem for which he was invited, etc. -- and his ultimate impact on the process cannot be denied. But not all designers possess a cornucopia full of credentials, nor do many regard these trappings as the true measure of performance, yet the contributions of these kinds of designers to the outcomes of our cases are also evident. Other factors entered, but these less fortunate professionals often made their mark by taking the hard road to status, via strategies for amassing it once inside the process. The object of strategy in these cases was not to gain personal status in any permanent sense, for this seemed out of the question most of the time and, for some designers, didn't matter that much anyway. The purpose was to give status to one's ideas in specific situations, where the designer believed that such status was a necessary device for overcoming social and political obstacles to seeing these ideas transformed into commitments to policies and actions.

One such strategy was to "borrow" status, to create an aura of prestige around an idea through association with people or ideas already of high status. In borrowing Pei's defunct General Neighborhood Renewal Plan for the Waterfront to defend parts of the existing circulation system, designer Crane hoped to bolster his argument by appealing to decision-maker Logue's sensitivity to Pei's reputation. The strategy of using the prestigious BRA Design Advisory Committee by the Authority's staff designers was another example, though the Committee's role in the Waterfront project turned out to be less necessary than the designers originally expected. However, the BRA staff has used the Committee quite effectively elsewhere in the Boston program, especially to review the designs of distinguished architects, like Pei, working for private
developers in Boston's renewal areas. In these encounters with prestigious Independents, we are told that the Advisory group is of noticeable assistance to BRA project designers in furthering their counterproposals.

A second strategy for dealing with this social situation that was evident in our cases was for a designer to increase his technical capability to the point where his idea could be endowed with a considerable "factual" basis, or in the case of evaluating rival alternatives he thought to be unfavorable, to devise strong technical arguments to downgrade the status of competing ideas. Because of the interchange between the social and technical sides of the urban design process, it is reasonable to expect technical expertise to be used instrumentally in dealing with social situations. The advent of the Downtown Waterfront Corporation in 1963 heralded a new period in the Waterfront design process, but so did Pei's appearance as a potentially powerful representative of a key Independent system. Fearing that Pei would play a part in the process far beyond the functional limits of his role and to the point of where major design responsibility might eventually belong to him, the status-conscious DWC staff made considerable efforts to gain a maximum technical advantage to give additional support to its conceptions of solutions and priorities. This was intended to weaken Pei's social advantage by, as one designer put it, "showing him up" in strictly technical matters. And Tunney Lee's strategies to block the Interim Report were motivated in part on the perceived status gap between the young BRA staff for the CBD project and Victor Gruen. Lee could not enter into direct competition with Gruen until he could demonstrate the technical inadequacy of the Gruen formula for Boston's downtown. Gruen's status never wholly diminished; it was Lee's that increased significantly. It was an equalizing process.
Lee also demonstrated how status in an environment may be built out of the quality of the technical performance a designer gives in the process over time. Performance is not always consistent with status in real situations, and a critical failing of the urban design process is that status often does not relate more genuinely to a designer's ability to solve the physical problem at hand. There is no guarantee that technical performance will be the key to achieving status, especially when measures of the effectiveness of the outcome of the design process may bypass the technical in favor of social and political criteria, as we have noted in this study.

Both a designer's social status and his technical capabilities are important to the making of urban form policies. In improving the urban design process there would be advantages in having status respond more quickly and accurately to performance. In real design situations, however, the match is not easy to make with any reasonable consistency.

Whether brought, borrowed, or built, status becomes an important commodity, for with it a designer can buy decision-making prerogatives his environment might deny him otherwise. The milieu's implicit criteria develop in response to a need to feel secure in uncertain or difficult situations where it cannot judge arbitrary from non-arbitrary, acceptable from non-acceptable. If in its eyes a professional can demonstrate the capacity for discriminate judgements or carries with him a formidable reputation for satisfactory action, the environment would just as soon he made the close decisions on its behalf. With status, the good designer is likely to have greater influence -- even control, perhaps -- over his social situation than it has over him. Other things being equal, the environment can worry less about legitimizing itself in terms of the spectrum of planning efforts to which it is related if its
legitimacy can be secured instead through the kind of men or ideas it can attract to the process. With this replacement factor the environment need only be consistent with itself in many such cases. Decision-makers may also be influenced by the reputation of their designers in considering the control over variables they should extend to them. And the difficulty of constructing a predictive model can be relieved, along with demands for credibility, if there is on hand someone with a model already who has used it before with social success, or has used it in theory and gained social enthusiasm. Gruen's ideology was well known and had very special appeal at an international level, even though the practical tests of it were generally inconclusive. Gruen was worth buying nevertheless, if only in the hope that the public enthusiasm for his uncompromising view of a once and only future might help the ideal to be self-fulfilling in the case of downtown Boston.

Status is a replacement factor. Other things being equal, the higher the status of the urban designer in his social environment the less likely the social pressures on him to conform to the environment's criteria for decision-making in uncertain situations. The higher his status, the greater the designer's freedom from conventional constraints of compatibility, certitude, and credibility in generating and evaluating urban form alternatives. But other things are not equal in the environment for solving urban design problems. The flexibility of the environment's standards will have to depend additionally on factors other than the relative status of one of its inhabitants, for it is clear from our cases that status alone is not all that determined how men made urban design policy.

Relevance of the Design Problem in a Universe of Problems

The orbit of the designer's world crosses the paths of other social environments
charged with solving other urban form problems in the community, and his system of
design belongs to some larger aggregation that represents the sum of all efforts
affecting a particular city or region. The size of the universe can vary, a factor
that will partially determine the number of people likely to find an Independent role
in any given design system attractive. In Boston the universe was well populated.
Victor Gruen's imported design staff quickly discovered how little the Boston
conglomerate resembled any they had experienced before. But more significant than
size was the difference in importance among systems of design occupying space in
the Boston universe. The relevance of design problems is unevenly distributed
throughout a universe, so that some problems are simply more important to solve
than others or, in the case of time, some are more important to solve before
solving others. This creates priorities, often subjective and implicit, and the
ranking can itself vary among individuals. Logue and Mintz, for example, held
decidedly different views on the relative importance of the Waterfront-Faneuil Hall
project in the grand scheme for a new Boston. However, some people's perceptions
happen to count more than others. Often they lead (or follow) majority opinions
that tend to substantiate their own rough ranking of relevance.

The ordering of overlapping and contiguous systems of design can be socially
determined: systems operating to rehabilitate older residential neighborhoods were
eventually to become generally of greater significance to the average Bostonian than
projects like the Waterfront. Or powerful Decision-makers may set the tone of a
project for political or personal reasons: Boston was perhaps unique in the number of
separate design problems whose resolution was centralized in one man, and Logue
controlled renewal priorities in the very early sixties with an emphasis on "showcase"
projects, of which the Government Center was paramount. Neither the Waterfront nor the CBD were so relevant to the political strategy that Logue and Collins had to effect in order to make their commitment to the City seem plausible, and of the two cases the Waterfront possessed the lesser status.

Priorities in a complicated world of complex and overlapping questions on the form of cities make a lot of sense to men who crave to act rationally and cooperatively about it all. At issue is the coordination problem, and priorities present an opportunity for resolving potentially large conflicts among interacting systems in some sensible fashion at some early point in time. But no set of priorities, even Logue's, are clear-cut or eternally durable. No zero-sum games are played in this universe. However, a generalized sense of relevance -- the fundamental extent to which a system of design is the subject or the object of other systems -- waxes strongly nevertheless.

One popular method for explicitly establishing priorities for a set of urban design problems and their respective systems of decision-making is to regroup the set on the basis of its geographic hierarchy, so that lesser policies are formulated in the framework of greater, or more general and comprehensive ones. In such a view, the Plan for the Regional Core would have been the most relevant undertaking in central Boston, eclipsing several General Neighborhood Renewal Plans that, in turn, contained guidelines for district plans like the CBD and the Waterfront that, in their turn, became a basis for evaluating the intra-district proposals of sub-systems operated by the Berensons, the Jordan Marshes, and the city agencies. Designers, as we noted, tend to accept the rationality of this principle for structuring and coordinating a host of separate activities in pursuit of comprehensive urban development.
But in real situations, normative theory defers to frank and practical admissions of the real state of affairs, so that the determination of relevance becomes a more complicated exercise in which ends and means become reciprocals. Comprehensive plans were of little consequence in Boston except for strategic value in satisfying political needs for compatibility. Functional plans of certain Independent public agencies were of far greater significance to the local renewal program and, in a situation where a city administration cavalierly pledges to make planning and development synonymous, the smaller private design systems operated by developers like Berenson and Tillotson become undeniably important determinants of the content of larger BRA plans, rather than the other way around. Relevance, then, involves strategic considerations of power, influence, and effectiveness that flow like some alternating current among design systems in a universe. And it should not be forgotten that relevance can shift over time. The Waterfront process, begun almost two years before the CBD and other neighboring projects, slipped in importance as these other systems of design began to function, one reason why the Chamber's designers felt more confident in making far-reaching proposals in 1961 than they did three years later.

Like individual status, system relevance can be internally generated. The relevance of a design system in the eyes of an outside world helps by implication to establish the importance of the social environment that is identified with the system, but attracting "relevant" people in addition to a designer to participate in solving an urban design problem not too relevant in the total picture is also an important strategy. At the same time Logue lured the Establishment into the CBD design process to cement a local commitment to the outcome, he was also giving the project some
class. This was even more important in the case of snaring the support of the Chamber of Commerce in the redesign of Waterfront-Faneuil Hall, for without an impression that rotting wharves, dingy truck routes, and an unpeopled environment in a forgotten and non-essential corner of downtown was important to men with other important things to do, the Waterfront design process may have been shorn of all semblance of relevance in a city fast becoming aware of its other real problems and the possibilities for solving them. The strategy for the Waterfront was a good one in theory, but its implementation often seemed less than successful because Logue still reserved the right to set the real priorities within the shadow of his pretended ones.

The priority "assigned" by a political society to a branch of policy-making in urban design can influence considerably the outlook of participants in that particular process, affecting their feelings of importance and worth. It seems fair to state that all design environments, regardless of relevancy, will opt for some compatibility with the total spectrum of policy-making, but the more relevant the system is to achieving the ends of a political society as that society has come, or has been persuaded, to view its ends, the less it is dependent on consistency with other tenants in its hierarchy, history, or neighborhood simply out of political expedience or justification of its own existence. The buck, for the most relevant, often stops there, and the burden of compatibility falls elsewhere.

Relevance of the problem, it would seem, can also influence the control over urban form variables by a given design system, under certain circumstances. Two of the four corridors for shuttling traffic around the important Government Center project lay outside the bounds of this key area. And in the Waterfront, the manipulations necessary to save Berenson's relevant investment in India Wharf changed
the whole picture of public action in the district. If it has priority over systems competing for control of variables, as Berenson's did in the eyes of Logue, a privileged system is likely to be in a position to get first pick in solving its problem.

Consistency and certitude are partly, but not totally, influenced by the relevance of the urban design process. The extent is not altogether clear, but it is clear that any urban designer devising strategies in any given case for dealing with the potential restraints on his decision-making due to these external social factors will have to include somewhere among his calculations an assessment of the importance of the work he and his erstwhile colleagues have come together to undertake. He must be able to perceive the kind of control and freedom his social environment feels it has concerning its own destiny. As in the case of status, however, relevance exists in the eyes of someone else, and a professional designer engaged in defining his problem -- including constraints -- will find the questions of status and relevance are often inescapably tied to the nature of the relation of the social environment to its reference groups, a matter we consider next on our agenda.

The Role of the Audience

The designer's social environment really extends beyond the segment isolated for the model in Chapter One, and up to now the conceptual convenience of assuming that people and groups not normally in direct interaction with the Designer role operate to influence designs through a filter of other roles has proved a useful way of managing an otherwise hopelessly unmanageable mental picture of social interactions in the urban design process. At this point, however, it is necessary to reopen the environmental model and look quite specifically at that influence so well concealed
before, and to examine the role in the urban design process of the rest of the context that we shall call, for its evident metaphorical value, the Audience.

No design environment, however organized, plays to an empty house, but the size, character, and temperament of the audience varies considerably. The Waterfront and CBD Designers, often through their Clients, and Decision-makers, enacted roles in front of an attentive city council, the local press, and other representatives and informers of the general public not directly tied to the problem-solving process as Independents or Custodians. Special publics, like the New York regional office of the Department of Housing and Urban Development were there too, hovering over the process and influencing the designers indirectly by affecting the behavior of men like Hazen and Logue himself. Certain other systems of design overlapping with the major processes of our case studies appear to have no audiences at all, but one can imagine they did. Berenson operated a private system without much concern for city councils and other BRA audiences but he knew nevertheless that a poor performance on his part could mean less financial assistance for his future projects, because bankers and investors are very visible among the interested spectators when private developers attempt to decide what their own policies and actions should be with respect to their particular slices of the urban geography. Even those design systems operating in bastions like the State Department of Public Works play to an audience that, while it may well begin and end there, at least includes the legislative system from which appropriations flow.

Professional designers themselves, regardless of the system in which they happen to be working, share an audience of peers, represented in most cases by their professional societies. Indeed, designers often accuse their more illustrious brethren of
gaining status by playing to a specific audience capable of proselytizing their efforts, on the assumption that the design professions influence laymen considerably through their traditionally enthusiastic magazines and journals that imply an accurate picture of how a designer's colleagues regard his performances. In the business of complex design audience and status may be rather closely related. It is often difficult for the public to make reasoned and independent evaluations of the professional, and respected opinions are welcome assistants in the process. Recognition within the profession is one such benchmark. There is some general evidence that playing to an audience comprised of oneself and one's peers is common among members of organizations established to solve specialized and complex problems, and that the professional problem solver often cares less about the ultimate survival of the organization than he does about it as an interim place for professional growth. Esteem striving replaces status striving. This may be true for the Gruens or the Myers, whose attachments to the BRA were ad hoc, but for the typical BRA staff member a loyalty to organization, to Logue, and to the success of a new Boston, were at least as strong as any responsibility to themselves and to their need for professional development. How a designer actually behaves in situations requiring him to reconcile individual and organizational goals should they conflict is something these staffers are likely to be better at answering than we are. Certainly, the effect of intrapersonal conflict on the urban design process warrants a study of its own.

Designers are not alone in selecting audiences, if in fact this is what they tend to do. There were a great many spectators to the CBD and Waterfront processes,

some watching most participants but others interested in some one individual and
his role playing. For the Decision-maker and his Clients to play to all of them
equally would have been to invite all the world up onto that fabled stage. So some
selection is inevitable if only to provide some coherence to the total environment.
Assuming the social environment is survival-conscious in addition to preferring to
structure itself without much concern for the efficiency of its internal processes,
should these prevent the environment from adapting to the needs of participants,
the ideal audiences would be those that cannot or dare not force the show to close
and those that would be willing to accept "backstage performances" as part of the
routine. In short, an autonomous relationship is most welcome. The further
removed from damaging criticism and the greater the freedom to operate, the less
the need for the social environment to make its behavior seem socially acceptable
and the more it is likely to constrain decision making to account for external
appearances. The urge to appear consistent, an externally-oriented factor in
setting urban design problems, is likely to dissipate under these circumstances, and
higher levels of risk and uncertainty can be entertained by the social environment
if its members can be assured that they will only have to answer to themselves for
unanticipated consequences.

The Boston stage was not the best of circumstances for action independent of
an audience in those early days of urban renewal. The structure of local politics on
an issue-by-issue basis was far better suited to the audience selecting the design
system than the other way around. Logue's radical departures from accepted ways
of doing things in the Hub attracted a curious crowd of spectators to the strange
spectacle of a giant agency trying to rebuild Boston in rampant disregard for the way
that city was accustomed to having its face lifted. Some of the spectators, notably
the press, were more curious than anything else, a factor that Logue no doubt was
grateful for. His relations with the city council were never really secure, but this
body wallowed in self-esteem anyway, and so long as the slender 5-4 majority of its
members stayed with urban renewal, it posed no real threat to the survival of urban
renewal and of groups like the CCBD who staked their reputations on Logue.

More to the point was the changing attitude of the Boston audience. It had
been usual for the public to be product-oriented in matters of design, caring almost
exclusively about the outcome of the process, and not worrying particularly about
how men arranged to get there. But products in Boston have become too complex to
judge in themselves, and, as discussed in Chapter Two, the loss in integrity and
resources was a mounting concern. Thus, the processes, the information, the
talents, the organization, and the checklists have come under scrutiny too, by the
same press and politicians, joined now by neighborhood and civic associations, pro-
fessional societies, and the local academic community. The form of rationality as
much as its content was pushed to center stage in those hectic early years of the
BRA, offsetting some of the advantages that Logue had gained through his bargain
for independent decision-making.

Some social environments can maintain more autonomy than others as a function of
their task and their personnel. Sometimes the relevance of the problem will condition
the attitudes of the audience, but it is not clear that the more critical task breeds the
more sympathetic or docile audience. Politically relevant problems may also bring
with them the most temperamental audiences. And the prestige an individual
transports with him to his roles in the urban design process probably influences the
audience's perception of the competence of the social environment. Whatever the contributing factors, the extent to which the social environment is forced to play to its audience varies from case to case, causing expectations of the designer's performance by that environment to be partially affected as a result.

Horizons

As most participants think about it, the proof of any plan is in its implementation. Rather than witness a tribute to their own ineptitude should their decisions turn out to be catastrophically incorrect, men would sometimes prefer that plans expire quietly and prematurely on some forgotten shelf (and this is quite acceptable -- almost expected -- by some audiences) or, better yet, that plans outlive their makers (for the longer plans survive untested, the more some audiences regard them as their own proof of fulfillment). The urban renewal philosophy unsympathetically thwarts these desires in its typical demands for short-range, action-oriented planning, but even the renewal process offers men the opportunities to avoid proving their recipes for change, because most plans are implemented in stages instead of all at once, allowing men to design with more than a single time horizon in mind. It is almost self-evident that the more distant the horizon the more casual the designing can be and the less concerned with uncertainty the designers need be, provided nothing intended to be effectuated, say, a couple of generations hence locks irrevocably into place at this time in the process. Thus, the fact that participants in the Boston CBD process could agree on a picture of what was on the distant horizon for downtown at the same time they could not specify tomorrow's actions is not to be regarded as unusual. It was not good design strategy in this particular process to
disregard technical performance in the short-range planning (and this may have been an influence on Lee's rising status). Immediate steps are ends in themselves in addition to being means to loftier goals and, in the expectation that either they or their long plans will expire in time, men concentrate instead on making the short range efforts work.

Plans directed at immediate horizons concentrate on feasibility more so than the distant plans do, and the criteria by which priorities are set include stress on what is possible to do first as well as what should be done first, that is, emphasis is placed on feasible means as well as on desirable goals, with the time horizon remaining fixed. In real situations, however, the distinctions between feasibility and desirability are less than clear, and often men will vary the horizon itself to help resolve the conflict, so that there is an effect on the perception of the problem that can derive from the timing of solutions. The Sports Center programmed for the Waterfront was, in 1963, more a desirable than a feasible alternative for satisfying the goal of hemstitching two districts together, but was secured in the plan by making that particular problem appear unnecessary to resolve immediately. In the same way, the emphasis on the mall-and-loop system disintegrated (for a while) when it was found that the Chauncy-Arch by-pass was a desirable solution to an intractable problem but that men had to wait patiently for it to become feasible. Later in the same process, with Chauncy-Arch undiminished in its desirability, the

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2 In listing the points of differentiation between narrow and broad rationality (similar to Weber's "formal" and "substantive" rationalities), Bertram Gross notes that in the narrow case desirability is largely given or assumed, and there is greater attention to feasibility. In the broad case, where the scope of action is marked by a longer time span, more attention is given to desirability, and greater risks and uncertainties in feasibility are accepted. See Organizations and Their Managing, The Free Press, 1968, pp. 548-50.
goal was again given less priority when the engineers suggested that the by-pass could be made feasible if constructed in stages over a long period of time. Ends, indeed, are often adjusted to fit means, and the constraints on means can shift over time.

Public policy to be effective must account for the likely future, and it often happens that the social environment has so little control over the future, especially its impending moments, that man cannot easily adjust immediate horizons to suit the demands of problem-solving and instead must accept timing as a constraint in its definition of the problem. Logue found it necessary to acquire South Station under the Early Land provisions of urban renewal because he had no way of postponing the sale of the property to the Port Authority or anyone else before the BRA was ready to develop Summer Street and the rest of Dewey Square. Immediate acquisition and early development was a feasible means of solving the problem given the constraints. It was not desirable, at least from Gruen's point of view, because of the BRA's insistence on taking full advantage of immediate opportunities by programming some public improvements at the same time, thus committing the City to certain actions that effectively closed the door to some of Gruen's attempts to search for more desirable mall-and-loop alternatives. A better example concerned the Mall itself. The self-conscious CCBD, worrying about the efficacy of the Washington Street Mall and content to let the idea whither away low on the list of priorities, found it the only feasible means of preparing for a likely future of cohabitating in downtown with Sears Roebuck.

The horizons toward which men gaze in solving urban design problems become a critical factor in the extent to which they place constraints on the urban designer.
The more distant the horizon, the less certain the solutions might have to be today, and the more flexibility in designing is possible. The type of design problem can make a difference here. The designer in urban renewal is generally faced with working under more limited horizons than, say, the men preparing plans for the year 2000 and beyond, but within his limits he can try to adjust priorities somewhat, if he desires ends not immediately feasible. The urban designer may discover, however, that he cannot have his cake and eat it too. The opportunities for him to influence the outcome that are implied in working on relevant problems may not always appear, because one reason that a problem may have relevance is a felt sense of its urgency and the need for some immediate solutions. Thus, while he may not be constrained by the environment's need for compatibility with other goals in this case, the designer may find the time horizon to be so near that he must be absolutely certain in his recommendations on means.

Resources of the Social Environment

Another time dimension is also important to the designer as he conducts his problem solving. The time available for generating and evaluating alternatives has always been considered a real factor in decision-making and in the way conflicts get resolved. But time is also a resource of the environment, often arbitrarily allocated to the designer, that can govern the kinds of strategies he employs in dealing with constraints. Psychologists studying the influence of time pressures on the character of problem solving have produced a host of propositions suggesting, among other things, that the motivation to reduce conflict will be partially determined by the time available for generating new alternatives;

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3 The following examples are from the excellent synopsis in March and Simon, Organizations, Wiley, 1958, Ch. 5.
that the speed of generating alternatives varies with time (the greater the time pressure, the more vigorous the search) and with the availability of a more or less satisfactory alternative already; that time pressure is of particular importance in determining the span of attention and, therefore, the focus of attention in the search process; that creativity under stress varies with the individual, so that while search under pressure will be vigorous for some people, it may at the same time be largely stereotyped; and that where time is short for deciding among alternatives that are difficult to compare the choice will depend on the focus of attention and the sequence in which alternatives are presented.

Obviously, time pressures condition the content of solutions as well as the character of problem-solving. So long as time constraints can narrow the span of attention, increase the reliance on stereotypes, reduce conflict by making conventional alternatives seem good, and influence choices by the order of presentation of alternatives, the suggestion is that the chances are greater for the environment to receive limited, conventional, obvious alternatives from which to choose, the greater the time pressures.

The Designer sees the difficulties another way. Time can also limit the search for information, constrain the use of intricate, time-consuming technical devices at his disposal in favor of handy rules-of-thumb and recollections of past experiences, place him at a disadvantage in keeping alternatives flexible, limit the depth to which he can study the consequences of any one alternative, and prevent adequate communication of his ideas through detailed graphic and symbolic presentations. Time is a genuine constraint that makes technical problem-solving strategies necessary.

Strategies involve choices in procedure, decisions on what is or is not important to do when doing everything is impossible. Limits on time can lead to selectivity and
economizing that may easily be channeled along socially or politically expedient lines, where some certainty is better than none, some partial solutions are better than none. Because time limits are often (but not always) externally imposed on the designer, it is a characteristic of his environment that can influence his behavior. Where time is short, therefore, a lot will depend on how the designer chooses to use it in dealing with the social situation at hand, and this will vary with the designer and with his definition of the situation. For Victor Gruen, whose ideology led to a limited number of stereotype solutions regardless of time, a wiser use of time was in preparing adequate communication and defense of these ideas, as the CCBD discovered by the large volume of supporting documentation of a very general nature that accompanied the Interim Report, itself a surprisingly refined statement of policy born of less than three months' labor. For Lee and Salvucci, there was not time enough to develop both alternative plans and show, relative to Gruen, why they were necessary. Partially guided by their perceptions of Gruen's status, they chose a strategy emphasizing technical capabilities. Time, often an arbitrarily-dispensed resource of the social environment, requires consideration in how the designer shall go about solving problems and what directions strategies might take in countering social constraints. And as Gruen demonstrated with the Fashion Square idea that remained in the draft urban renewal plan, it is possible under pressures of time to cope with constraints by ignoring them entirely.

One feature of the way we have chosen to study the urban design process is that, over the period of months and years, the pressures of time are less keenly felt than at the level psychologists usually study the phenomenon. Interim deadlines like the date of the CBD draft Urban Renewal Plan, the limit set by Logue on the BRA's counterplanning
efforts, and his ultimatum to Mintz for resolving the expressway ramp question with Ricciardi are measures intended to keep the process moving, to evidence progress toward a completion date. Most of the interim deadlines imposed by the social environments of the Waterfront and CBD processes affected the use of time immediately prior to them, but not many of these administrative ploys tended to close the book entirely on technical decision-making. Gruen's draft renewal plan of January, 1964, was not based on enough current survey information for either the consultant or the BRA staff to regard it as a final document, and counterplanning was the main thrust of the CBD design process for almost a year after Logue's original deadline. Atlantic Avenue, of course, was not a fixed feature of the plan until well after Mintz persuaded Ricciardi of its merits. While there was technical flexibility in the face of administrative rigidity in these cases, it tended to vary as a function of the distance (in time) between an interim deadline and the final closing date of the process. And the more interim deadlines the more opportunity of the social environment to lock ideas into place prematurely.

Where time is a significant parameter, designers and managers may wish to assess the other resources the environment commands for ways of coping with the pressures that time puts on decision-making. Complex problems can be factored into parts, and labor, if present in sufficient quantity, may be divided accordingly with each man or group tackling a specific sub-problem of the whole. It may be done functionally, just as the BRA organizes its staff into functional subdivisions like Design and Transportation, but where time may prevent adequate investigation of all consequences of general alternatives, work could also be organized into geographic sub-problems, each group taking a separate sub-area for study. If the problem is one of maximizing the creative effort,
then deliberate multiple occupancy of the Designer role is a familiar ploy, a device most notable in organized design competitions.

The designer's assessment here not only includes a canvass of the resources that may be brought to bear to assist him but also of his ability to commandeer a share of them and to administer the men and money placed at his disposal. This ability, however, is likely to be a product of the political and managerial skills of the individual designer involved, often well outside the formal channels of resource allocation in a problem-solving environment.

From Model to Reality: Some Concluding Notes

This has been a view of the urban design process from the inside looking out, from the vantage point of the designer concerned with acting rationally and creatively in his own efforts at solving urban design problems and what he is likely to see that is relevant to his concern when he peers into the immediate social context in which he operates. He scans the context, first of all, to see if he can make any sense out of the way men are convening around him, his problem, and his methods for solving it. Then, in terms of his performance, he wonders about the significance of what he sees. What kinds of information, criteria, and design possibilities are going to be worth worrying about now that someone else has overall responsibility for making policy decisions? And now that his one-man world of problem-solving has been invaded by colonizers intent on governing his choices in goals, means, and operations, how much influence over policy can he really expect to exercise? Much of the time the designer will discover the coherence and significance of the social environment will be a function of the explicit problem at hand, and he will adjust his problem-solving methods and his
aspirations for a strong role in the process accordingly. Unfortunately, this permits little more than ad hoc principles to be the guides in understanding the external environment.

This thesis has been a search for general properties of urban design processes, regardless of the explicit differences in the shape and impact of the social environment to which the problem-solver must adapt from case to case. The easy part of the search resulted first in a simple outline of the component elements -- roles and functions -- that fashion a structure to the context, and then in a general indication of what it is about roles and the men who occupy them that will shape the structure in any given case. The more difficult search, and for us the more interesting, has been for relationships between the "inside" and the "outside" of the design process of a relatively stable and general nature that are significant to the designer for predicting the scope and content of implicit environmental limits on quality designing. These relationships were analyzed in Chapter Five and some determinants of how strongly they might be expected to hold in a given case has been the subject of this current chapter.

Our findings lead us first to a comment on the model of the urban design process presented earlier. Although concentrating attention on a single subset, this has nevertheless been a study of constraints. Any decent model of the urban design process cannot ignore non-technical limitations on solving a design problem, be they social, cognitive or motivational limits. Within such a model constraints of all three classes form part of the definition of problem, because they are statements of the conditions under which the problem has to be solved. Cognitive limits are statements of those conditions deriving from a diagnosis of the individual's capacity to achieve, retain, and transform information. Motivational constraints center on the decision to participate and derive from a variety
of factors including an assessment of personality variables, external inducements, and compatibility of the job with other roles the individual enacts in daily life. Social constraints, to the extent we have examined them here, are limits on action deriving from the social situation in which the individual operates. In terms of the model of the urban design process, what we have done here is to identify five general characteristics of the social situation from which certain common constraints have been shown to derive, characteristics that we feel are important enough to the urban designer to be explicitly stated among the prescriptions for defining the problem that a refined model of the process must include.

All this does, however, is provide the designer with a simplified checklist of considerations he should take into account in any strategies he chooses to employ in dealing with his social environment. The list tells him how to assess his environment for predicting his capacity to act within it. The closer to reality we move, the more complex and subtle the assessment process becomes. Interpreting the findings with an eye to their application can give some indication of the practical difficulties that designers face when they attempt to read their social environments, even when armed with some idea of what is significant to know.

When evaluating his social environment for its interest in the social consistency, certitude, and credibility of his decisions, the designer is likely to find that the significant determinants vary independently or, to state it more accurately, may not vary dependably from case to case in consistent relation to one another. Even urban renewal, considered among the most programmatic forms of planning, admits to considerable variation in these respects. One might reasonably expect highly relevant problems in renewal design to have associated with them a relatively short range of
horizons that condition the environment's attitude in evaluating proposals, leading the designer to expect his environment to be open to new ways of thinking about design problems, but within the limits of conventional means for solving them. But stringent time constraints and a very demanding audience may also be present, forcing the designer to accept traditional views of problems as the real ones. Yet, if he has status within his environment he may be able to employ it strategically and overcome inhibiting social factors to a satisfactory extent. Or, if status is not his trump suit, and he cannot use strategies for building or borrowing it, he may look for ways of varying the timing of solutions as a means of changing the perception of the problem, or persuade his social environment to give him more time or other resources in exploring possible solutions more carefully. Here his ingenuity and aggressiveness may become his own most valuable resources.

Not all renewal problems are relevant, even over a period of time in the same project, yet horizons may tend to be immediate nevertheless. And the designer's status may be shifting continuously, but the audience may be changing too, or time constraints are suddenly no factor to anyone. The possible variations from case to case in these factors make it virtually impossible to generalize on their appearance; knowing one or more of them does not permit the designer to infer the others. Even if he could, the designer would find that the further away he moves from the case of the American urban renewal program the less he can generalize from it. In underdeveloped countries engulfed in rampant urbanization all design problems seem to be relevant but not all social environments can muster financial and human resources in support of the urban design process. Moreover, large segments of the audience can be apathetic no matter the relevance in these cases. And even in this country a highly relevant problem, such as pollution,
can have distant horizons because resources for dealing with it are currently insufficient. A problem can achieve relevancy by default, too. It could be part of a tiny universe of problems so that its relative importance is exaggerated beyond the seriousness of the goals it pursues.

The designer’s status also admits to subtle interpretations. If his is the only design talent available, he may achieve status without having to do very much about it. Cultural differences could be important too. Urban designers often find it easier to achieve status in other countries than in this one and, other considerations aside, may find greater opportunities for creative expression there too. On the other hand, status can be a most insignificant weapon in social environments whose audiences do not care very much about the form of their cities as they do about the jobs and the social services that urban living can provide them, and cannot be convinced that urban form is a necessary input into solving their chronic social and financial problems.

This may be the unlikely case as we move into the last three decades of a century that has witnessed profound social changes, and a reshaping of public values. People in this country have become more conscious of the form of their cities and less tolerant of the aberrations therein, and of the breakdowns in the functioning of the urban environment. Thus, future audiences to the activity of the urban design process are likely to be more motivated and more searching than now, if that is possible. The design of new communities appears to be a timely example, given the probability that the same generation that will inherit a redeveloped Central Business District and Downtown Waterfront will also see the first concerted and full-scale effort in this country to create entirely new urban environments where none now exist. Estimates vary, but considering a population in the year 2000 half again as large as that in 1965, it is clear that men are not estimating
conservatively when they conceive of building these communities by the score. Because of its scope the effort is generally thought to involve both the public and private sectors, though the respective roles and interrelationships are very much a matter of political debate at the moment. But because new communities are fast becoming relevant to the nation as a whole, it is clear that the design processes are likely to draw audiences of considerable variety regardless of how institutional arrangements for planning and building eventually develop. The planning for new communities should afford unusual opportunities to design free of many of the typical physical constraints that plague the renewal of developed areas and make the solving of urban renewal problems so frustratingly complex.

The social environments surrounding the designing of entirely new cities will not be able to divorce themselves entirely from their audiences. If our only goal in organizing the planning process for new communities were to create the environmental conditions for problem-solving that minimize pressures to produce design policies of conventional quality, the strategy for insuring ample time and other resources to explore new ideas and to pursue highly desirable goals never actively sought before may have to focus on arrangements for adjusting the role of the audience so it cannot function to judge prematurely design processes that will take years to complete. Especially if the public sector is involved, the audience is likely to have standards for judging the relevance of a program for planning new communities that, because of the costs involved even in the planning, will perforce relate the program to a problem universe less characterized by other systems of urban design than it is by programs for waging wars, keeping the peace, terminating poverty and disease, and paying off the public debt. Too frequent a review and refinancing of new community planning, therefore, is likely to constrain the
problem-solvers to produce results with one eye on the political survival of the design process and the other on the objective of achieving quality products. And there is no guarantee that survival and quality are always compatible objectives. Longer-term budget commitments offer an alternative, or a system of grant reservations similar in concept to the current urban renewal procedures, so that design processes are not faced with pressures to compete for resources simply to stay afloat.

This does not intend to deny the larger society a role in designing its new communities. In fact, audiences can play a much more positive role than now in the urban design process. The mechanisms for reviewing and evaluating the process are generally haphazard, and are themselves targets for improvement. More of the audience should be brought directly into the process, though we do not as yet have any rules for describing a more perfect union. Rules are missing not only for encouraging greater citizen participation in the design process but also for systematically building quality into this participation, as measured by the scope of values represented and the sophistication of the representatives.

Whether it be in new communities or old central cities, the social environments for urban design share common characteristics that act as parameters on the problem-solving process, affecting the performances of men as they seek quality in the form of cities. Analyzing the parameters separately and in their simple interrelationships clouds a couple of general points about design, designers, and the prospects for the future. First, the thesis can be interpreted as a study in the effect of the distribution of power, authority, and responsibility on the making of urban form policy. Status is power, and so is the command of resources. Relevancy implies responsibility -- the obligation -- to make decisions, but because problems may be relevant more people have or want the
power to make decisions than otherwise, regardless of who retains formal responsibility. Authority is the accepted right to decide, and its locus is also likely to shift with the characteristics of the social situation that have been the focus of this chapter.

Second, the environmental conditions for generating and evaluating urban form alternatives that have consequences for the technical side of urban design have implications for the entire planning process, because design is a component inseparable from the others that comprise the system of decision-making by which men choose future courses of action. Men place considerable value on urban form, sufficient to motivate them to participate in the making of design alternatives without very many other inducements, and enough to cause them to divert their time and energies to the solving of a design problem even though the process may take months or years to complete. That they usually do not value urban form for all the same reasons, or for reasons consistent with those of the urban designer has consequences that have been the focus of exploration in this study. But the making and selecting of these alternatives, despite the inherent social and political difficulties, remains for many of the participants the central mechanism in the overall community planning process. Where the urban design component is a weak force in planning, so the argument goes, then the planning process itself has been jeopardized. Improving the rationality and creativity of the design process, then, conspires to improve the planning process of which it is a part.

In the final analysis, however, the urban designer himself is the key to the strength of the process. No amount of strategy for dealing with the social situation replaces his ability to generate and evaluate quality alternatives. Nothing we have said so far

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should be construed as assuming that the designer is a rational man acting in an irrational context, and that lifting environmental constraints on him automatically produces perfection in the achievement of community goals through urban form, as if it were inherent in human action to be able to achieve this. Indeed, the constraints emerge because it is rational for the men around him to assume the designer cannot be any more objectively rational in his behavior than they can in theirs. Limits on rationality are the inherent feature of human action, and marshalling technical and administrative support for the design process is one way of escaping these limits. But imposing additional limits on the kinds of information and criteria taken into consideration is a way of escaping them too, making it possible for the designer to be more rational, albeit within a more narrow pattern of action. Without these additional reins on him, the urban designer may be more a menace than a servant of cities in pursuit of quality through innovation. Divorced from a social context, he can be his own worst enemy.

The irrationality of the context derives not from the constraints but from the premises on which they are built and destroyed. It is rational to be concerned about acting in socially and politically acceptable ways, although the consequences are sometimes disturbing to the designer. It is not rational, from the point of view of quality in urban design, to presume that a man's status and reputation are measures of his ability to perform rationally and creatively in a given case and, thus, to defer to his value judgements in difficult decision-making situations. The art of urban designing is an art of the mind; and it persists as a feeble art so long as cities remain as conceptually complex as they are now. And we are not really sure that some men can solve urban design problems better than other men, because our measures are too crude. At least we know that no one as yet seems capable of solving such problems as well as they might be solved.
Thus there is a balance that must be struck between the rationality of the designer and that of the social environment around him. This study has concentrated on circumstances where it is not always achieved, where the environment, through its inadequacies, may constrain higher technical quality in the outcome of the process. But that is one side of the coin. Obviously, the urban design process could be studied from the outside looking in because that kind of perspective is as valid to sketch as this one, given the designer's inadequacies. If the order in which he presents alternatives is an example of how critically the designer may influence decision-making in certain situations, it is quite likely that he can unduly restrain the men around him from achieving their valued social and political ends by taking advantage of their cognitive inadequacies. By acting rationally insofar as he sees it, the designer may contribute to a higher form of irrationality in the process.

In this study we have explored the structure of the urban design process, and we have come to use structure to signify some coherence in behavior that persists and assumes an accepted place in generating and evaluating urban form alternatives. With a set of roles as a framework, the structure has been analyzed into its two parts: how participants in the design process behave in occupying roles and how they behave in playing them. That certain features of both behaviors are persistent can be demonstrated empirically. That the behavior so noted has an accepted place in the design process cannot be demonstrated in quite the same way, however. This sometimes requires value judgements by the analyst that go beyond the empirical data at hand for their basis, because functionally and politically acceptable behavior may not be ethically or intellectually acceptable at the same time.

After several hundred pages of documenting and analyzing how other people debated acceptable behavior in the enactment of the role of the urban designer in making urban form policy, these last several paragraphs have belonged to the analyst entirely. And we
have used them, it seems, not to settle the debate so much as to fuel it. Despite the
difficulty the designer may have in reconciling his environment's behavior as it gropes
toward rational and creative urban form policies, he must remember that his own methods
for solving complex design problems and his own values of urban form do not necessarily
derive from a greater, and thus more acceptable, rationality than that possessed by the
men around him. If he remembers this in those situations requiring political as well as
technical wisdom, situations that experience will teach him are ordinary features of the
urban design process, he may well find that his social environment, handicaps and all,
is very useful to have around.
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BIOGRAPHY OF THE AUTHOR

George Noel Kurilko received his undergraduate degree in architecture from the University of Cincinnati in 1960 and a Master in City Planning from M.I.T. two years later. During the course of his graduate study he held fellowships from the Sears-Roebuck Foundation, the Lasker Foundation Trust, the Mellon Foundation, and the M.I.T.-Harvard Joint Center for Urban Studies. In 1962, he received a Distinguished Student Award from the American Institute of Planners, and spent the 1964-65 academic year at the University of Rome, Italy, under a Fulbright grant from the U.S. Department of State.

The author has had several years of professional experience in solving city planning and urban design problems. He has worked as chief planner for Adams, Howard and Oppermann, a Cambridge-based consulting firm, as Director of Urban Design for the Worcester, Massachusetts, Redevelopment Authority, and as a planner in public and private practice in both Ohio and California. Mr. Kurilko is a provisional member of the American Institute of Planners and served in 1967 on the executive board of the Institute's New England chapter.

Publications by the author include "Critique of Planning Education", in Planning 1961, published by the American Society of Planning Officials, and a review article in the May 1968 issue of the Journal of the American Institute of Planners. An example of his urban design was published in Kepes, ed., The Nature and Art of Motion (Braziller, 1965). Most recently, he has contributed to New Communities: Challenge for Today, a special study published by the American Institute of Planners in 1968.