TOWARD A THEORY OF
URBAN PLANNING STANDARDS

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Abstract:

This paper analyzes certain trends and practices discernible in
the current planning process. As a result of this analysis it suggests
an adjudicating process which would differ from present day practice on
three important counts:

1. A unified legal document for the control of the total urban phy-
   sical environment is made to replace the Master Plan, the Zoning
   Ordinance and the Building and Fire Codes which it is believed
   are often unrelated to each other or to the community's goals.
2. This document is divided into two sections. The first is a state-
   ment of principles and goals determined by the community. It does
   not contain a map. The second is a series of regulating laws which
   are intended to bring about the conditions set out in the first
   part. These are formulated and administered by experts and can
   continually be challenged against the principles and goals. This
   second part includes a locational diagram as part of the regula-
   tions and this diagram can be challenged against the written state-
   ment of aims in a manner similar to any other law.
3. The locational diagram divides the land into areas according to
   the actual degree of disturbance created by the user rather than
   into areas of specified land use in each of which a particular
   degree of disturbance is arbitrarily assumed.

Thesis Supervisor: Professor Burnham Kelly
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INTRODUCTION

It is believed that a reappraisal of planning standards is necessary at this time for two reasons: firstly, the standards currently in use reflect the values of a society which has been superseded and, secondly, scientific and technological advances have made the formulation of standards a more precise process. It is also suggested that an extension of standards into spheres within planning where at present inadequate guides exist is necessary and that a method of formulating these standards which will serve present day needs must be found. A general framework for the planning process within which such an extension may take place is outlined.
PART I: AN EVALUATION OF RECENT THEORY AND PRACTICE

I. DEFINITIONS OF PLANNING

NEGATIVE CONTROLS:

In most parts of this country planning is carried on through a system of negative controls which include restrictive zoning and subdivision ordinances as well as similarly restrictive health, fire and safety codes. In a general way many of the institutions of control in our society have, in the past, advanced from this sort of restrictive and negative philosophy towards a more positive and permissive one. In public health, welfare and criminal activities, to cite simple examples, the evolution has proceeded from curing illness, aiding the needy, and punishing offenders towards an attitude of prevention and rehabilitation. Similarly, it is believed that this kind of readjustment in values is at present occurring within the planning field.

"... THE COMPREHENSIVE ARRANGEMENT OF LAND USES ... "

A definition of planning which is frequently used describes the process (1) as guiding and controlling the uses of the land. Although this suggests a more positive attitude it is still far too limited an approach to the actual situations with which the planner is involved. It is precisely the word "situation" that helps convey the extended meaning of planning: the uses of the land in a conurbation are but one facet of the total social process which is the planner's problem. Geographically, of course, we have come to accept the idea that to plan within the arbitrary political boundaries of
a single town within a region is unsatisfactory, and metropolitan or regional planning has become a fairly standard way of understanding the total situation. Similarly, it is useless to protest that the relatively immature discipline which is planning today, should try to limit its activities merely to the uses of the land, a particular facet of the urban phenomenon. For example, the economic base study has been accepted as a useful tool in the allocation of amounts of land for different uses, and is sometimes also used to determine its location. To the degree that recommendations are made which affect these factors one is involved in so called economic planning. Similarly, we have accumulated much data to show that the size, location, occupancy pattern and siting of housing facilities are enormously important in determining the type and degree of social interaction that will occur\(^{(2)}\) — surely, this may be termed social planning. For the purpose of definition then, it may be useful to suggest that since the unit with which the planner must be concerned is society as a whole, it would be an abrogation of his responsibility to limit his consideration to the uses of the land.

AN ADJUDICATIVE PROCESS

The fundamental basis upon which this broad view of planning rests is the understanding of planning as an adjudication between the freedom of the individual and the safety and well being, the "general welfare", of the community as a whole. This view suggests the concept of society as a changing and developing form. In earlier periods of history goals were achieved through the use of force. As societies developed, an ideal which took hold of the liberal imagination was that government should control individual action as little as possible. This laissez-faire doctrine was finally exchanged, in some sectors of life, for the concept of planning, which has developed in two quite different ways. In totalitarian societies the planning authority is a central body which acts to limit and restrict individual choice. It does so without consult-
ing those affected. In our own society both the means and ends differ from those in totalitarian societies: ideally, goals are "democratically" arrived at, which would suggest that the concept of the "public welfare" differs from that in more restrictive societies. In fact, as the public welfare concept is being continually broadened, so the planning field itself is broadened. The great dilemma, within this contest then, is how to maximize freedom under planning, how to foster initiative, and how to overcome the stultifying effects of conformity to the multifarious regulations which limit and bind us on all sides. It is believed that since our planning standards ultimately become our regulative laws, it is essential that standards are formulated with an understanding of their full impact on the future of society. Standards can surely stimulate creativity and aid in the creation of a better living environment for more of us than exists at present. These ends, however, will only come about if our standards, which are our chief tools, are better than those now guiding development.

II THE INFLUENCE OF VALUES ON STANDARDS

If society is attempting to operate its planning machinery as a kind of balancing scale between the state and the individual, then the chief problem in maintaining an equilibrium is that of the goals toward which this planning process is oriented. It is assumed that implicit in any action lies a philosophy of behavior, and that, therefore, one's values are the chief determinants of the choices one makes. For this reason the influence of values on the formulation of standards must be considered.

AN EXAMINATION OF GOALS

Whose Goals?

One of the first problems to be solved is that of determining the goals
toward which the planning process strives. The question arises as to whose
goals the plan is aimed at achieving. The complex sociological problem of
determining the power groups in a town and of trying to strike an equilibrium
among these groups becomes at once apparent. In a recent book on community
power structure (4) it was suggested that the business group controlled all the
major decisions in a metropolis of half a million people. Other sociologists
have believed that it is not individuals as members of society who are respons-
sible for the important community decisions which are made but only as members
of special interest groups. The discouraging fact in these analyses is that
these special interest groups consistently place economic values - rather
than any other type of value - above all others. These groups are simply inter-
tested in more and better business. The biologically determined standards
of a better environment are at the bottom of their scale of values. These
sociological studies are useful in reminding us that although our political
system may resemble an ideal form, it is not, nor can it approach, that ideal
unless true participation by an enlightened citizenry actually does take place.

The Problem of Participation:

Several important points should be examined within this context: the first,
that planning is a continual process, that no plans are final and that only if
enlightened participation takes place can goals be formulated in a meaningful
way. By an enlightened citizenry is meant not only that the people are offered
choices but that the full impact of these choices is made known when decisions
are being made. For example, decisions regarding density must be made in relation
to the knowledge of the cost of various services as well as an examination of
the effect on the aesthetic and social values of the people in the area. These
alternatives must be presented so that those who in terms of the existing power
structure have not had the experience of responsible civic activity may still
realise the implications. When they learn that their judgments can determine
policy then a new sense of public participation with a wider knowledge of the privileges and rights will begin to assert itself. The situation is analogous to taking a child out of a harsh environment in which his wishes were never made known nor was attention ever paid to them; put into a new environment where choices are offered and decisions required, he may at first withdraw in fright from this overwhelming sense of responsibility. Only in time will he learn that to make decisions which affect his own welfare is a necessary part of being a full member of society.

However, it would be incorrect to suggest that all that is needed to arrive at a perfect planning program is to hold a full scale plebiscite. R. Buckminster Fuller has said that in view of the high level of instantaneous communication which is possible, the perfect system of government could be arrived at if each citizen were to have a direct line to Washington through which he daily made known his decisions on all matters that had arisen since the previous day. In spite of its machine romanticism, this idea expresses an old American political tradition which was first voiced by Jackson. The belief is that the governing of men is at bottom a very simple business and that "experts" not only cause needless complications but that to use them exclusively is somehow unjust to the citizens at large. These ideas will be discussed further when the planning process as such is examined in more detail.

Direct vs. Representative Democracy:

Karl Mannheim has suggested that in small scale societies in which the direct communication of goals and the methods of achieving these goals was easy, direct democracy was an entirely suitable form for the decision making process. However, in our own "mass society" these forms and functions must be adjusted to the use of our present knowledge of political and social theory. As we are thus made aware of the necessity for choosing representatives so, too, we are made aware of the responsibility to inform them of our choices in important
matters. In this way the continuing process of the formulation and reformu-
lation of our ideas to aid in the decision making process emerges. It has been
suggested by numerous writers that in fact the planning function is just this
kind of process rather than the settled static choice of "a plan" to which
we must conform forever after. Therefore, we can understand that to speak of
the "goals" of planning is really to speak of a Janus-like creature. The one
head represents the process of continual decision making while the other head
represents those ends toward which our society is dedicated through the use of
the planning process.

"... for every American Family ..."

In 1949 when it was declared that "the goal of a decent home and suitable
living environment for every American family ..." was to be the national policy
we had begun to define suitable planning goals. It was believed that the human
organism has biologically determined needs that must be accommodated in any
good plan. And though this sounds like a frugal enough goal it is appalling
to think that even this basic level of need is frustrated for a large number
of families in the American environment. If to these biologically determined
needs are added certain psychologically necessary factors which according to
C.E.A. Winslow are at least as important as these biological minima, a clearer
idea of requirements begins to emerge. It is believed that to suggest in spec-
cific terms what these minima are would be an incorrect procedure because as our
understanding is broadened so too our standards will change. What is important
is to establish the proper methods or procedures to help us achieve our goals.
Later on, in the discussion of the areas in which standards are operative,
certain specific areas in which present day knowledge is available will be used
as case studies of the methods by which knowledge in other fields can profit-
ably be used within the planning process.
Positive Goals:

Another point of some importance in this problem of the formulation of goals is the belief that goals should always be expressed in terms of positive performance requirements rather than negative restrictions. Negative restrictions are merely a mirror held up to current malpractice. Since the planning process should stimulate creative thinking in the re-shaping of our environment - one of its chief functions after all - it must be organized so that this becomes possible. A statement of aims which allows of varying interpretations would seem more likely to lead to imaginative solutions than a listing of prohibitions.

THE DETERMINATION OF PRIORITIES

The Role of Values:

Related to this problem of the examination of goals in planning is the similar problem of the determination of priorities. In this process, as in the formulation of goals, values are the chief determinants of the order in which various goals are to be achieved. It is in this stage of the planning program that "needs" measured in terms of welfare implications must be balanced out against the purely economic values of our society. However, no unalterable schism between these values is to be understood. In the so-called "underdeveloped areas" this problem emerges in its clearest form. In these areas the chief goal is to raise the people's living standard. This process usually consists of several simultaneous actions: the improvement of agricultural methods, the introduction of industry, the improvement of government services such as the distribution of a pure water supply, the provision of a more adequate drainage system, of a better system of roads and of better housing for the workers. Each of these improvements is dependent on the other yet the problem of where to enter this circle of improvements may be crucial to the entire enterprise. If the small supply of available capital is spent on improving the workers' living
conditions, will an adequate supply of capital remain for further development of the industrial activity of the country? If capital is invested in industrial growth, on the other hand, and the workers remain in poor physical health and with little positive motivation, then industrial growth within the area is bound to suffer. This is an extremely crude simplification of the problems associated with development in these areas and is only intended to emphasize the complexity of the whole problem of priorities.\(^8\)

The Place of Programming:

Having formulated one's values and the goals which are a literal translation of those values, the problem of charting a clear course of action is usually made difficult by several factors. For example, after goals have been decided on, one must chose among them to determine which are more immediately needed and which are most capable of realization. Frequently in deciding this sequential preference one must give precedence to a particular project rather than another which may possibly be more urgently required because the choice would make possible subsequent choices which would fulfill still other needs. A kind of classic example of this issue would be the development of a river valley to meet the variety of long standing and urgent needs of the people and the land considered as a unity.\(^9\)

Obviously the process of determining goals and its concomitant, the determination of a system of priorities, has enormous consequences. For this reason one of the crucial problems within the planning process is the lack of a systematic method for rating each project in terms of achieving the desired end. The chief determinant in what is usually a fairly haphazard process is that of expediency. For example, to choose projects entirely in terms of those which are most capable of attainment can lead to disastrous results with little profit to the kind of environmental changes which are necessary. In a recent article it was suggested by a British planner after a visit to the States that
the unit of the town, which is the most usual planning unit in this country, is so poorly fitted to making important decisions in relation to the real problem of city-region planning that most planning today can only preserve the status-quo in terms of entrenched property values. Yet it has been amply demonstrated (as for example in the attempts to carry out the plan for the City of London) that the present irrational ownership pattern is one of the chief deterrents to improved development. Similarly, Clarence Stein speaks of the opposition of city officials to the proposals for an environment "for the motor age" at Baldwin Hills in Los Angeles because those city officials were seeking to preserve the plan for an irrational street pattern which had been laid out for the area with no real thought of the kind of life this physical environment would impose on future residents. The important consideration here is that expediency is usually a synonym for the continuation of established patterns of behavior. Projects conceived within this frame of reference usually upset little and, conversely, usually create, in the positive sense, little that is worthy of achievement.

In a similar way, to choose from among those projects which will lead on to further activity may be understood in both its negative and positive senses. Obviously it would be unwise to choose projects which would stifle future activity. This has been demonstrated time and again by those cities which have had consultants do "a plan" and then feel that future activity is no longer required. But perhaps in more subtle ways city planning has erred in the past; the need for recreation, or health or community centers has been felt in the city. Rather than doing a study to try to determine how the physical facilities would be used in the town it has been assumed that fixed standards which suggest a population-project ratio would solve the problem. The facility has been built and its effects have been negligible in changing the situation which existed. In New York City vast and expensive recreation areas have been provided in slum areas
for a population which/obviously expected to give these facilities intensive use. But their very size and splendor mitigated against their use by an overawed population. Smaller, simpler facilities in more dispersed locations would obviously have been a better choice. Yet always to choose from those projects which lead on to future activity, on the other hand, can lead to a kind of pseudo-make-work emphasis in which the real needs of the environment are not being met and the changes effected are insignificant in terms of the total image necessary.

Operations Research:

The activity which has been called "operations research" is that method of analysis which ascertains the final goal and seeks to establish each step which is necessary for its achievement. This would take into account of all relevant factors, including the existing situation, the resources which can be utilized, the attitudes and habits of the people involved in the change, and the place of any particular operation in relation to the total structure of operations. This kind of approach to planning problems can be an invaluable tool if it is used within the kind of framework suggested above. There is always the danger in using such a tool that the technicians who are employed to perform this method of analysis may substitute their own values for those of the larger society. And within the complex suggested by the methods of research used, an improper weighting may be given to the intangible factors which should be at the core of any responsible planning program. Therefore, in spite of the use of more refined techniques of analysis, the problem of value judgments continues to exist.

REFLECTION OF VALUES IN PHYSICAL FORMS

Definite physical forms emerge from value concepts and it would be a fairly simple exercise to work out a scheme of classifying cultures in terms of their dominant values. One simple example has been chosen by way of illustration.
Past Forms:

The pseudo-aristocracy of the Old South as typified in Charleston or more especially in the semi-rural plantations of Virginia, the Carolinas and Georgia reached its most mature physical development during the period of Greek Revival architecture. It was symptomatic that no indigenous form could be used but that rather the external forms of another culture had to be grafted to the local conditions of society, labor and climate to produce what indeed became a very notable architectural tradition. These houses were known for their ballrooms and for the elegance of similar "public" rooms within the building. It was a society in which women were idealized and in which hospitality was considered a prime virtue - if the visitor were of the right social status. The private life, that of contemplation or the cultivation of knowledge, was not much encouraged and so the public rooms became the dominant spaces in these buildings. And as today the true viscera of a house are hidden away so too, the real viscera, the essential organs of that society, the slaves' quarters were hidden from one's immediate view. These people who, it was believed, were absolutely essential to the health of the cotton economy, were housed in quarters which in no way vied in architectural distinction with that of their masters. Since they were only slaves one did not acknowledge that they might indeed have the same biological needs as their masters. It is interesting to note that the slaves were regarded as belonging to two separate castes: those who were the immediate servants of the house had a very much better living environment than those who were merely regarded as machinery, the workers in the fields. And it is true that this fundamental dichotomy is today still in effect by the provision of separate facilities for Negroes and whites. The recent Supreme Court decisions which question the validity of these economic, psychological and political values are acknowledged as among the more difficult facts for southerners to acclimatize themselves to.
Present Forms:

The Primacy of the Dollar

The dominant form which impresses us in all parts of the country is the pattern which was first established in this country with Penn's Plan for Philadelphia and was later followed with the 1811 Plan for New York. The motivation for this pattern was not to confuse people, quite the contrary, these lots were set out for sale, all equally accessible, therefore, it was reasoned, all equally desirable. Without doubt it was also the easiest kind of pattern for a surveyor to lay out. This concern for maximum profit has rarely given way to the primacy of any other set of values. Throughout the history of the planning movement and the period during which restrictions appeared, this motive was never seriously questioned. This is not to say that interest in profit per se is either good or bad. One of our more gifted young writers suggests in an extremely provocative essay called "The Humanist in the Bathtub" that perhaps in this seeking lies a tremendous force and spirituality which has profoundly influenced American thinking. If spirituality can be defined as the questing after the unobtainable, perhaps this is so. Nevertheless, in these terms one may suggest that this profound preoccupation with profit or spirituality may in fact unfit a man, or society, for full participation in the life that hums around him. The problem would seem to be that perhaps a kind of humanity may be lacking in a society whose primary concern is with an abstraction or an absolute of one kind or another. And if our ends are the maximization of human capabilities, then perhaps, what may be required is a society whose values are human ones.

The Golden Rule of Exploitation

It is also interesting to examine the philosophic foundation that permeated those legal documents that control and mold our environment. The basic assumption seems to be that people who own property within our society are interested in
the maximum exploitation of these resources without concern for the social costs which may be the result of private activity. This prejudgment leads to the next, that society exists to guarantee certain rights for the social body as a whole, the idea that a social contract must be drawn up between the have and the have-nots. Therefore, in this complicated problem of how best to regulate private action without too many restrictions which might interfere with the natural right to profit, we call on "experts" to help us out of the dilemma. These experts must have accepted the values of the society in which they perform. They accept the golden rule of exploitation and try to write new legal machinery in a way which least upsets the existing, familiar pattern. The fact that many of the physical patterns are the result of unreal or unobtainable goals rarely troubles these experts. They are paid to reinforce the existing pattern and basically to preserve the fairy tale. Two examples should illustrate this point: the proposed Harrison, Ballard and Allen zoning ordinance for New York City would allow for a future population expansion so that the city could contain 20,000,000 people! Mumford speaks of this as the stake in built in congestion that the private landowners have in N.Y.C. This kind of density is obviously one that ignores all human needs except the craving for profit.

Secondly, any description of the older American city would include the blighted area of crumbling, decrepit buildings that surrounds the most valuable land and property in the city -- the CBD. Yet these areas are always areas of extremely high land costs because of the expectation that the CBD will expand in this direction. We have seen that rarely does this expansion occur, yet this blighted area is nonetheless treated as though it is actually, not potentially, valuable property. In the usual zoning ordinance that blankets about 3000 of our cities and towns, this schizophrenia is most fully expressed. Existing land uses are given asylum: all that is, is good, seems to be the philosophy. Endless streets marked by marginal business activity are called, in these ordinances, "commercial areas", where perhaps a truer nomenclature might be "commercial
recreation", or, how else can one understand this bizarre gambling, this belief in the mysterious second coming of the unknown profit?

In terms of the Hoyt description of the structure of our cities it is useful to understand this fantasy of urban growth and structure because these ideas have probably been among the most influential in shaping the future development of the urban pattern.

Clustered around the central business district, Hoyt maintains, is the most dense area of residence, followed in progressively radiating rings outwards with less dense development. We will not investigate his strange sociological interpretations of this area distribution of the classes of American society. Nonetheless, the basic theory that the working class which is the majority of the population should desire to be located close to their working quarters has been reaffirmed in a great number of zoning ordinances. These ordinances are also responsible for zoning the outer edges of our cities as the most restrictive residential areas to guarantee the highest degree of amenity, and proceed toward the center of town with less and less control. This would suggest that those areas which are most densely settled and which proportionately contain the most people are least in need of any guarantee of the amenities of homelife. Parks are usually established toward the outer edges where land costs are less, and in terms of the density pattern, are furthest from the most people.

Two other factors should be discussed in relation to this pattern which has been foisted on us, in spite of the changing form which a changing economy would require. Hoyt's analysis assumes that the center of the city is the center of production activities. This, no doubt, is the kind of pattern more characteristic of the nineteenth century city than that of the twentieth. During the earlier century the dominant power source, steam, dictated a close clustering of activity near the steam generator. But with the advent of electricity this kind of tight clustering of productive activity was no longer necessary. Further, as incomes went steadily up and car ownership began to be thought of as a further extension
of one's private utility lines, the necessity of living close to work no
longer became necessary. The results of many factors working simultaneously
produced a pattern of diffused industrial groupings(16) and, similarly, diffused
residential areas which now began to be occupied by the very people who Hoyt
had suggested lived in close-in locations. There was one major exception, the
ethnic minority groups, who for the most part were kept in central city ghettos
while the suburbs which began to stretch toward the horizon became a one income,
age, color, class, status confine(17). Yet, in spite of these tendencies, very
little change could be noticed on the zoning map which persistently held to
the belief of the limitless expansion of the CBD.

A Possible Alternative:

What is being questioned is the persistance in thinking of one kind of pattern
of growth while all around we had evidence that a completely different pattern
was emerging. It is not that the pattern of dense inner core surrounded by
successively less dense zones needed to be merely modified. Rather, what is
being suggested is that the idealized picture of the zoning map should have been
revised to foster exactly a reverse pattern of growth and development. Surround-
ing the central core, which would be an area of most dense daytime population
would be the least dense residential area, interspersed with parkland. It is
believed that this is valid on two counts: blighted inner areas generally cost
the municipality more than they bring into the city, and the fewest number of
people are receiving either a proper living or a proper working environment in
this area. The entire area exists because of the fantasy expectations of the owners.
Therefore, in terms of the adjudicative process discussed at the beginning, it
would seem that the best use of this land is one that would profit the largest
number of people and harm the least. Since there is a large daytime population
at the core these people should have the pleasure of a pleasant environment for
their daytime activities, as they are supposedly assured for their nighttime ones.
The area adjoining the CBD would, if left to its present type of uses offer the least in the way of amenities to the largest number. Changing it over to a low density use offers more amenity to those who will be there and a suitable kind of buffer between different intensities of use is created. The next zone, because it borders on a relatively open development can be slightly more dense, and so on until the outer edge is reached, adjacent to the countryside, where the largest number of people can be accommodated in the area offering the most amenities. Naturally, this picture assumes that growth is limited to specific areas, and that certain other open uses occur between the urbanized areas. But this assumption, surely, is the easiest kind of assumption to make under the existence of the present wide range of powers over property that can be exercised by the planner. Therefore, to suggest a pattern of growth that does not revise current concepts, but in fact, reverses them, is perhaps to enter the realm of utopian thinking, a continuing and honorable tradition. This particular picture however does seem to meet the needs of the people in reference to their resources: The private motor car, the freeway, and the need for amenities in both daytime and nighttime locations. In terms of the needs and resources of industry — the no longer existing need for central locations, and the need for larger sites — the picture seems equally valid.

PARTIAL UTOPIAS AND ITS PROPHETS

However, to speak of utopias in this generation is to become aware of a kind of general myopia which seems to infect those who are in a position to shape our environment. No longer are we offered choices which in fact differ from one another. We are given only partial utopias where the important elements are but little changed, and the specific parts of the environment are regarded as if they were catalytic agents which if changed or activated would by themselves bring about a completely altered environment. Three examples may make this clearer:
The Traffic Engineer

Probably the most truly contemporary and beautiful large scale form which is apparent in all parts of our environment is that of the new freeway with its sinuous curves and complicated interpenetrations of spaces which occur at important intersections. In the East where a distinctive urban form is more concentrated and more identifiable, this new overlay is an exciting and beautiful superstructure which emphasizes the dominant directional lines of the city and gives it a dignity and order that it frequently lacks from most perspectives. It reminds us of the superstructure which overlays an old building while it is being remodeled because it suggests a spare, economical and strong form below which is frequently more impressive than that which finally emerges from beneath this chrysalis. In a similar way the super highway in the city offers an exciting vista which had not usually existed before. In western cities like Los Angeles where the urban form is more amoeboid and an essential lack of structure is its most dominant characteristic, the super highway is a welcome strong counterpoint against a monotonous rhythm. But while we can admire this virile new kind of form in our urban environment, it can hardly be said that this product, injected in the bloodstream of the familiar environment, will be responsible for a vitally needed change in the living and working environment of the people who live in the area. This injection is an addition, hardly a basic change. It operates to get people to and from exactly what was there before. The suburb had reached out farther than would have been thought possible, but it is the same suburb. Between the endless suburb and the central blighted areas we have only added the road builder's sphagetti. What could have been one of the important tools in the realization of the new environment, has instead only added a Steinbergian decoration to an already meaningless picture of two garages connected by an endless tangled maze. The vast amount of time and money spent on The Journey has without a doubt affected the sensibilities and the values of most of
those who participate in the ceremony. A mindless vacuity has replaced the time that might have been spent on some other more fruitful activity, and while the mind blanks out, the reflexes take over and the jazz plays on. The sense of comfortable somnambulistic motion has led to many social aberrations and chief among them is the hatred of the city as a form, while depending on that form for one's livelihood and for the administrative and distributive functions that continue to be performed at the center. When one can find a city planner again who loves the city instead of distrusting it and finding it an unfit environment in which to bring up his own children, one will know that the road builder has finally been superseded and that perhaps a utopia has begun to germinate.

The Sanitarian

The second prophet of deliverance who speaks in much more subdued tones is the sanitarian, and his view of what utopia is to be was finally enunciated as official government policy in the urban renewal sections of the Housing Act of 1954. This man is not an extremist who says that unless great sums are spent and fundamental reforms carried through, we will still remain with a highly unsatisfactory environment. He speaks softly and reminds us that we have inherited a paradise that has been befouled. All that is necessary for paradise to be regained is a vigorous cleanup campaign which will profit the men of profit, and therefore all of us. His view of the world as well ventilated, heated, vermin-free and with plenty of fresh water and a workable sewage system, reminds one of nothing so much as the Skinner Box, a carefree environment for the undisturbed, and vaguely unworldly physical nurture of the infant. This particular brand of air-conditioned nightmare is especially insidious because implicit in it are many values that one would consider as representing the nice adjudication that was discussed earlier. Here indeed the concept of the general welfare flourishes, but always the concept of "little plans" holds sway. The
values are sound, for the most part, but we can only turn away to ask if the world promises nothing more than these bare facts of the physical environment which offers no threat nor indeed any promise. Is this the fruition of a dream of high fulfillment for the needs of our times?

The Master Planner

If each of these has produced only partial utopias there is a third mover in our society who claims mastery over the whole complex problem: the single man who will, in a limited time, turn out a "master plan" for any community, large or small. This is usually represented as "meeting the needs of the people" who are, however, rarely consulted or whose needs are, in fact, but little understood. The danger here is that while the others can be shown up as dealing with but a limited facet of our environment, and therefore their plans can easily be understood as lacking a complete view, the specious product of this man is represented as "comprehensive". No longer do the slow painful choices have to be made, the careful weighting of values reappraised, here is a finished package.

One well-known United States consultant was reported to have spent less than a week in one of the larger South American metropolitan areas before he presented his "master plan" of the area.

THE PLACE OF UTOPIAS IN OUR TIME

If the characterization of these utopian views has been grossly caricatured it was done for one main purpose. The kind of situation which faces us today will admit of no easy or one-sided reform. Because this is obviously so, two attitudes have prevailed: the muddling-through attitude which suggests that if only the day to day problems are met this would become the best of all possible worlds, and the attitude prevalent in many parts of the academic world: the belief that through the judicious exercise of the intellect one can set up ideal situations, or models, which can serve as archetypes for the perfect situation. It is believed that today neither of these attitudes will suffice.
Behind both is a medieval belief that an absolute solution does exist and that it can be found. The place of utopia in our times differs from that of other periods. No longer can the search after ideal forms be justified as an exercise that is tied to reality in any valid way. Absolute solutions to situations in flux are an absurdity. What is needed, it is believed, is an ability to formulate goals, systems of priorities, and the various interrelationships that should obtain in the physical environment in the light of these processes. With the use of techniques and measurement criteria established in the various fields that impinge on city planning, it is believed possible to establish a set of performance criteria that will enable society to achieve its goals. The Master plan itself, for example, frequently includes a statement of goals before proceeding to a description of the small details. Frequently one finds that the details have but little relationship to the broadly conceived goals in terms of the kind of environment that the areas can or should provide for their future citizens. The kind of city form that was suggested earlier was outlined not so much to provide a specific answer, which in any case it does not do, but rather to suggest that the stereotyped thinking which has led us to conceive of cities in one form rather than in any other of a myriad of possible forms is in fact limiting the goals we chose. It is believed impossible to suggest anything more than relationships among parts. Therefore, to draw a plan which illustrates any one set of relationships rather than alternatives is to be guilty of thinking in absolute rather than the relative terms which are more suitable for our changing times. Later, a discussion of the invalidity of a single map rather than a set of suggestive diagrams to accompany the written principles will be discussed. At the present time, the studies of physiological and psychological functions as well as the investigation of the performances of different land uses will undoubtedly yield results which we must be prepared to utilize. In relation to these research programs the objective statement of a definitely developed science of land use utilization appears in its infancy indeed. What few relationships
could be called "principles" of land planning yesterday have usually degenerated into nothing better than cliches today. As an example, the relationship between industrial and residential land uses is in reality a subject that has just begun to be explored in any systematic way at all. Yet it is this fundamental relationship which was first controlled in the earliest planning regulations in this country. Obviously preconceptions were at work -- and still are today -- in defining these relationships which should be subjects of fact rather than opinion. All of these problems point toward the fact that planning in the future will increasingly become an activity which is not so much the solution of problems but rather an activity which will be devoted to the synthesizing of knowledge from many diverse fields to aid in the formulation of the standards which will govern the measurement of man's total environment. It must be constantly borne in mind that these standards are the basic shaping forces in our environment because inevitably the trend has been to use standards usually written to suggest minimum values to represent maximum goals.
REFERENCES

1. This definition is the official statement of The American Institute of Planners and can be found in their official Journal.


5. Mannheim, op. cit.


PART II: BEGINNINGS OF A NEW ATTITUDE TOWARDS STANDARDS

I. TWO PIONEERING STUDIES

THE PRESIDENT'S CONFERENCE:

The early years of the thirties were a period in which the old orthodoxy of opinion was being replaced by a new outlook. In the housing field, for example, an important milestone was The President’s Conference on Home Building and Home Ownership which resulted in the publication of 11 volumes. It was at this conference that the first glimmerings of public concern with the essentially private matter of shelter were dealt with in a way which was to have permanent repercussions. Positive objectives toward which home building should strive were enunciated. The early writings of those in the public health movement in both England and this country had cast their shadow before them and the Conference dealt with those matters which could be called the fundamental biological needs of the human organism. This need had indeed been neglected by much of the building in most of our major cities. A few subtitles of matters which were discussed at this conference will indicate the range of problems which were dealt with: ”Light, air, orientation, lot size and light”. And under the general subtitle “Housing Standards Design and Construction” followed such titles as, "No courts, windows, light penetration" and even "the Environment of the Home - The Community - Air Pollution". Undoubtedly this part of the discussion was influenced by some of the publications in the Harvard City Planning Studies, such as the second volume on BUILDING HEIGHT, BULK AND FORM in which the importance of scientific studies of sunlight and light was commented on by medical and health specialists. Clearly, the trend was from personal bias
toward the use of objective criteria to establish needs and to ascertain how these needs might best be satisfied.

"MODERN HOUSING"

The questioning of this whole period was summed up in a book written by a young American woman who had the impertinence to suggest in 1934 that American housing simply could not measure up to the standards which were the least essentials for a modern environment. From this shocking conclusion she stated that only in Europe could one find housing which could qualify as modern. In MODERN HOUSING Catherine Bauer voiced an opinion that was uppermost in the minds of many who were concerned with the whole problem of the kind of environment that we live in. The book commented that the time had come when all of us might reasonably expect our environment to satisfy certain needs positively rather than frustrate them. One of the chief reasons this book has exerted as much influence as it has, is that here one finds a positive approach to the problem of standards which should govern the building and rebuilding of our environment, instead of only a list of poor practices which should be prohibited. In current jargon, this approach might be termed the first tentative grappling with "performance standards" rather than the usual kind of personal biased view which calls something either good or bad. By using her standards as a kind of check list one can find out which parts of the total are satisfactory, which parts should be changed, and also a direction toward which the production of shelter should be directed.

The list of requirements from which Catherine Bauer's minimum standards are derived is in no sense final or definite. On the one hand it is a crude mixture of specification standards which states positively the one way in which a final desired result can be achieved, and on the other, it is a listing of goals. Nevertheless, it is from such a list that the laborious process of writing standards can most effectively proceed. For this reason, a brief examination of
this pioneering effort is considered worth while.

Catherine Bauer lists five chief categories of needs as basic considerations: decency, health, amenity, comfort and convenience, and safety. As might be expected from such a list there is both an overlap among the requirements and some omissions that might reasonably be included. Properly, these standards regard the home not as an isolated aedicule but rather as part of the total environment which would include the place of work (which, it is suggested, should not be more than half an hour's journey), the circulation system ("no heavy-traffic streets immediately adjacent"), some community facilities ("immediate or easy access to schools, necessary shops, cafes, and social centers"), other houses (which should be "grouped harmoniously"), and the inner and outer spaces and equipment of the home itself. This outlook which regards the entire town as an extension of one's complete realm of activities is probably the most important concept implicit in this listing.

One may quarrel with the definition of the relationship among the parts, but such a quarrel of the present with the time bound standards of twenty years ago is the result of the insights one gains from the passage of time. In a similar way, specific space or equipment "needs" reflect the fact that current practice has changed from that earlier period due to technological and design innovations. These changes indicate that no longer can we be satisfied with the single answer but rather we must suggest alternative solutions to the problems raised by basic requirements. Similarly the criteria suggested are sometimes phrased in terms of a specific technology which has frequently produced certain unsatisfactory forms. These forms are singled out as poor, when rather, what should be suggested is that they result in a poor relationship between the need and its satisfaction. For example, under the "health" heading is the requirement for "adequate air and
cross ventilation". The minimum standard to satisfy this requirement is cited as "as large a glass area as climate and heating provisions make practical". Today large glass areas are frequently not movable and certainly they are not the only way to satisfy the need for cross ventilation. This may be achieved through the use of louvers made of any number of different materials, clerestory windows, skylights or artificial ventilation. Therefore, the error is to equate "glass" with "ventilation". Although this seems trivial and probably an obvious example it is chosen because it does illustrate how well meant suggestions are frequently taken at face value, become codified and finally come to be the regressive requirements of what had been at one time a progressive code. In a similar way "small and inner courts" are singled out as a particular evil that must be avoided in terms of providing light, air and an "attractive outlook". This particular aversion is probably based on the kind of space the New Law tenement in New York City provided between buildings - a thoroughly inadequate shaftway which gave no real amenities. However, it is incorrect to state positively that a "small" or an "inner" or a "paved" court as such is "bad". What should be established is the relationship of this space to other spaces, the particular way in which it is handled may create an abomination in one case or a joy in another. The point here is that standards must be concerned with relationships and never with absolutes.

This brings up the final point of criticism in relation to the standards suggested by Catherine Bauer: none of the standards have proposed a unit of measurement. To use terms which are vague or ambiguous may result in poor administration since the administrator may not be informed of the intent of the standard, or, alternatively, the vagueness may lead to non-administration simply because the standard in practice seems to mean nothing at all. We are all more sophisticated than was possible during the thirties and we have become aware of the naivete of using terms like "noise" and "dust" without qualifying adjectives. In a similar way terms like "adequate light and air" still remain to be defined.
What is suggested then, is that no standard which does not give a unit of measurement is of much value by itself. The great task ahead is the development of standards which may be called "open ended". They would result in uniform application, they would not be arbitrary in their demands and they would be clear and simple to understand. Finally, standards must be reasonable at the time they are written and flexible enough to allow for unforeseen changes of various sorts so that new uses, new relationships between and among uses, and new forms would all be allowed, provided that they are in the interest of the general welfare.

II THE ROLE OF PROFESSIONAL SOCIETIES
RECENT ACTIVITIES
A.P.H.A.

Probably the single most important standard-making body which has influenced the practice of city planning in the U.S. is the Committee on the Hygiene of Housing of the American Public Health Association. The Committee was originally established in 1936 "at the request of the Housing Commission of the Health Section of the League of Nations as a North American committee in correspondence with the central organization at Geneva". It was organized by the American Public Health Association with the central belief that "the home is primarily an instrument of health; and that it is the duty of the public health profession to establish the fundamental health objectives which should govern the design of the dwelling", as well as the neighbourhood environment, the logical extension of the home we live in. The Committee included representatives from the fields of city planning, architecture, engineering, building construction, home economics, the social sciences and public health.

The rather remarkable influence the Committee has exerted can be traced to several factors, not least among them has been the personality of the Committee's
Chairman, C.E.A. Winslow, who in his pioneering perseverance and humanistic philosophy is rather like a latter day Sir Edward Chadwick who was responsible for sanitation and housing legislation in England in the late 1860's. Chadwick's concern, as is Winslow's, was the writing of minimum standards in these fields which would state the public interest rather than reflect the narrow interests of special pressure groups. This courageous and infectious humanism has won the Committee enormous support.

The belief that the planning profession should at all times be dedicated toward furthering the general welfare has found specific and concrete aid in the publications of the Committee. For the first time in recent planning history the Committee attempted to give measurement criteria to the qualitative standards that are the planner's every day concern. These criteria are elaborately worked out in the reports of the Committee. For this reason the planner has used the reports as handbooks of specific advice when dealing with the neighborhood environment and the diverse problems that surround the home itself.

The term "healthful" as used by the Committee in heading its publications as "Standards for Healthful Housing" is similar to the use of the term by Innes Pearse and Lucy Crocker in their writings on the Peckham Experiment. "Health" is conceived of as a positive state, not merely the absence of illness. Health is the state in which the individual achieves harmony with his environment and a mutual interaction is apparent which results in ordered growth and development. Pearse and Crocker speak disparagingly of "the so-called 'planning' so much in vogue" because they believe it to be "no more than piecemeal correction of the mistakes of the past; a negative approach to the separate disorders of a disintegrating society".\(^{(7)}\) In a similar way the Committee has stated that "the mere elimination of specific hazards in poor neighbourhoods falls short of the real goal of planning an environment which will foster normal family life".\(^{(8)}\)

This positive emphasis which has consistently emanated from the Committee's reports since the publication in 1939 of BASIC PRINCIPLES OF HEALTHFUL HOUSING is
a characteristic too often forgotten by planners themselves in formulating standards for their own guidance and use.

It is useful to examine the governing concepts in some of the reports in order to gain insight into both the philosophy of the Committee and the successful methodology. This analysis may serve as a guide to the way in which standards should be written today, allowing for the changes in the concept of problems, methods of analysis and systems of measurement which have been refined during the intervening period. BASIC PRINCIPLES was written from the point of view of the thirty essential health aims which should be attained in the healthful home. These were formulated in the specific terms of the standards which should prevail if optimum physical and psychological conditions to promote growth and development (to use the Peckham phrase) should obtain. In a sense this publication was a step in the direction of writing performance rather than specification standards. An example should suffice: the first three principles were stated as:

1) Maintenance of a thermal environment which will avoid undue heat loss from the human body
2) Maintenance of a thermal environment which will permit adequate heat loss from the human body
3) Provision of an atmosphere of reasonable chemical purity (9)

These standards are obviously, in the sense described above, "open ended" primarily because they do not say how these ends are to be achieved, the chief failure of specification standards. Except for the fact that no unit of measurement is suggested in these standards, they do meet the qualifications established earlier: they are not arbitrary, they can have uniform application, they are easy to understand, they are just as reasonable today as when they were written and they are flexible enough to allow for any technological changes which may have occurred permitting different ways of attaining the same results. Finally, these standards obviously represent the interests of the general welfare.

Probably the publication of the Committee which most influenced planners was the first volume of the three devoted to Standards for Healthful Housing:
Our point of departure has been that the essential test of an adequate environment is whether it supplies reasonable protection to health under the following criteria:

a) Protection against accident hazards
b) Protection against contagion and provisions for maintenance of cleanliness
c) Provision of adequate daylight, sunshine and ventilation
d) Protection against excessive noise
e) Protection against atmospheric pollution
f) Protection from fatigue and provision of adequate privacy
g) Provision of opportunities for normal family and community life, and protection against moral hazards.
h) Provision of possibilities for reasonable aesthetic satisfaction

While these criteria would seem to represent an excellent starting point for the formulation of standards which in a general way represent the wide environment that we spend most of our time in, it is unfortunate that the Committee did not remain similarly unspecific as to how these objectives could be attained without committing itself to the formal design concept expressed earlier by Clarence Perry. The end result has been a series of sterile precepts which attempt to express the "proper" relationship of house to each of the community facilities. For example, specific types of circulation systems are examined with some aspects or types being given a priority rating over other types and neither allowing for totally different systems to take the precedence they may deserve some time in the future when the pedestrian may again inherit the earth and different types of vehicular transportation will have channels uninterrupted by streams of dissimilar traffic. Similarly, specific space standards for recreational facilities are time bound in so far as they are based on concepts of a specific work week with its resultant limited leisure time, and space bound in so far as they are based on limited accessibility. The changing composition of our population will undoubtedly affect both the location and type of recreational facilities as will the development of different types of leisure time activities. Similarly, the location and extent of local shopping facilities is bound by a particular system...
of merchandising that has already shown signs of radical change; therefore, the specific standards suggested are based on a passing phase in our technology which has produced specific forms of travel, of retailing, of parking requirements, of internal space standards, etc., none of which have reached a stagnant stage of development. Finally, merely to suggest in a general way another fault in the total environment outlined in PLANNING THE NEIGHBORHOOD, the allocation of school sites by location and size to serve different population groupings is specified. These standards are based on notions of a single method of teaching a certain type of school curriculum. Since John Dewey's revolutionary concepts of the place of the school in society and its responsibility to society, even more profound concepts of a changing educational methodology have been suggested by those in the field of communications theory. For example, if children are going to depend to an even greater degree than now on developments of audio-visual methods of instruction, it may be that in the not too distant future the home with its television set may replace the school as an educational center.

Basically then, the implicit assumptions in PLANNING THE NEIGHBORHOOD need to be questioned if we are not to go on monotonously reproducing a pattern of development that no more fits our needs than would the goods which an archaic tool could produce to meet the qualitative and quantitative demands of our society today.

OTHER TECHNICAL ASSOCIATIONS

Building codes are usually a composite of structural, plumbing and electrical codes. In this field there are a number of active standards-making organizations such as the American Standards Association and the American Society for Testing Materials, as well as many building industry trade associations. Model building codes have been prepared by the Building Officials Conference of America, The National Board of Fire Underwriters, the Pacific Coast Building Officials Conference and the Southern Building Code Congress. In the field of plumbing standards
H.H.F.A. and the U.S. Department of Commerce have jointly issued a report which was developed by professional engineering societies in conjunction with building, plumbing and health officials. The American Standards Association also has for sale a plumbing code sponsored by the American Public Health Association and the American Society of Mechanical Engineers. In the field of electrical installations the latest edition of the "National Electrical Code" which was prepared by the National Fire Protection Association has gained wide recognition.

The important point to be gathered from all of this tedious detail which can be found in a recent H.H.F.A. publication is not that one organization rather than another has sponsored research to enable the formulation of these standards but rather that these standards are based on measurable information or empirical data which have been formalized and subjected to rigorous examination by those who have the knowledge and ability to test these standards and to suggest changes when necessary. Above all these standards can be the rational expression of the most advanced knowledge available so that one can talk in terms of facts rather than folklore about whether or not a standard will work.

In this description of the standards which govern construction it would seem that here indeed our society has arrived at an ideal solution to a complex and troubling problem. Unfortunately this is hardly the case. Although in many cases these standards do in fact represent the most advanced knowledge of the performance of materials subject to a variety of conditions, one also finds imbedded within this fabric many specification standards which represent the technology that is no longer with us, superstition and the vested interests of those who are responsible for requiring a specific type or use of material when a newly synthesised product might do the same job easier, quicker and perhaps cheaper.

In 1950, for example, C.E.A. Winslow was able to say that almost all 2200 local building codes which were operative at that time were specification rather than performance codes. One of the great problems they raise, he asserted, was that
most of them:

are based on the practice of then or twenty years ago and fail wholly
to allow for the introduction of new techniques. They involve needless
expense in many instances and they omit entirely many types of health
protection which modern thinking would dictate. The only satisfactory
solution of this problem lies in the replacement of outmoded 'specifi-
cation' codes by 'performance' codes that set forth the basic objectives
to be attained, and permit the use of any materials or methods that will
adequately attain the ends in view'.

SUGGESTED RESPONSIBILITIES

One of the points of great significance in the development of codes and
ordinances is that the courts have not yet accepted the fact that psychological
needs are as valid as physical ones. While it is true that these needs are far
more difficult to measure it must be realized that if a single unit of measure-
ment does not meet all the conditions of mankind than the non-measurable or as
yet imperfectly measurable needs cannot automatically be discounted as less
essential. The courts' reluctance to accept non-physical needs as realities
suggests that a body-mind dualism is operative in American society. In Dr. Robert
Oppenheimer's recent address to the 1955 meeting of the American Psychological
Association in San Francisco he stressed the need for pluralism in approaching
the solution to problems. At this time he elaborated on what he termed "naive
thinking", that is, the belief that all experience or phenomena of significance
were capable of measurement. He said that he now understood this belief to be
the result of a kind of orthodoxy of opinion that had grown up in his field and
which had no place in the development of new concepts of the real nature of our
universe. In view of this opinion, he stressed the need for as many different
approaches toward the solution of problems as possible. This point is made to
suggest that the ability to measure is an excellent and just way to deal with
the kind of problems that planning does deal with but that it is equally poor
practice to dismiss a standard if at the present time it cannot be formulated
in precise terms that admit of measurement. The problem of calling something
a physical hazard and therefore prohibiting it while at the same time not
admitting that other factors, such as too small living units, are psychological hazards is an inconsistency in a country in which approximately half the hospital places are inhabited by the so-called "mentally ill". In short, one of the great services that can and ought to be performed by the professional societies that help in developing standards is to point out the full round of problems that are associated with the development of any series of standards. These societies should be more aware of the implications of standards than any other body which merely attempts to formulate the standards from the information submitted to it by the professional institutions. The body-mind dualism problem was used as an illustration of this because through all the bulletins put out by A.P.H.A. runs the notion of the unity of mental and physical health and the need for the planner to consider both at the time he considers the standards formulated by this organization.

A.P.H.A. does stress the point that from a purely physical view many of the standards they have suggested may not be justified. From the total viewpoint, however, the goals they have set should obviously be the lowest minimum standards that the planner should suggest to meet the needs of the general welfare. It is this total viewpoint with which planners should be concerned, since they, of all public servants deal with the creation of a total environment rather than just one free from one or another set of objectionable conditions. It is regrettable, therefore, that after carefully working out standards which "represent the essential space requirements of the dwelling which, without extravagance, will make physical and emotional health possible" in PLANNING THE HOME FOR OCCUPANCY which was published in 1950, in their PROPOSED HOUSING ORDINANCE the standards suggested are so very much lower. In 1950 they proposed that 1,550 square feet would be required for a family of six, but in 1952 they suggest that the same family might only require 650 square feet. Obviously, different assumptions govern each set of standards. A.P.H.A. made clear in 1950 that they did not expect the carefully detailed studies of performance within the home to have any influence on legally enforcible minima, but rather to influence extra-
legal thinking in terms of "desirable" minima or goals. Here indeed is the mute acceptance of the non-legal status of psychological needs as those which cannot be as precisely measured as physical ones. But if our standards do in fact represent our goals, and it would be naive not to recognize the fact that they are the limits by which our physical environment is set, then is it not the duty of the professional societies to stress the importance of desirable minima as the lowest standard which should be legally enforced? If this is not so, then our legal machinery represents not the adjudicating mechanism mentioned earlier but only the enfeebled demands of atavistic situations which have long ceased to have any real significance in terms of conditions of today. For example, if an international tribunal were set up to discuss the possibilities of outlawing war and the problem they had to solve was the definition of modern warfare, we might say they had failed if all that was required on an international level was the outlawing of the use of the longbow and cavalry - the situation at Agincourt rather than Hiroshima. In a similar way to speak of 650 square feet as a minimum space standard for a family of six people has an ironic tinge about it and as a standard is hardly worth giving legal status to at all.

The final point to be made in this discussion of the role of professional societies in the formulation of standards is that they ought to be in the advance ranks of the standard making bodies. We have evidence to show that few organizations, even those that start off as revolutionary bodies, can be depended on to keep this position. Therefore, it is suggested, that all standards must be examined in terms of the purpose they are to accomplish rather than in terms of their authorship. This point is made because in planning circles it has become obvious that a hierarchical orthodoxy has slowly come into being with A.P.H.A. at its apex. It is believed that the A.P.H.A. handbooks should be used with a great deal more scepticism in the future than they have met with in the past. Always we must try to understand what the desired end is and write our standards in such a way that a number of different solutions becomes possible. It seems
wrong to be forced to depend for the final answer on any one authority, even
if it is as responsible an authority as A.P.H.A. has been.

III O'HANDLE & THE EMERGENCE OF PERFORMANCE
STANDARDS

The third example of a major change in the attitude toward the standard
making process was marked by Dennis O'Harrow's presentation of his paper on
"Performance Standards in Industrial Zoning" before the National Planning Confer-
ence. This paper is probably the single most important landmark in the develop-
ment of a truly contemporary attitude toward the control devices used by planners.
Here again, as in the A.P.H.A. studies, the importance of O'Harrow's contribution
lies not so much in the specifics he outlines in terms of how to measure noise,
or smoke, or odor, or similar characteristics which have caused industries to
be classified as objectionable uses, as in the attitude that informs his think-
ing. What is clearly communicated to his audience - which has now been tremend-
ously expanded since the paper was published both by A.S.P.O. and the National
Industrial Zoning Committee - is his new way of thinking.

O'Harrow demonstrated in his paper that prejudgments and attitudes based on
past experience have but little place in determining the location of land uses
of the future. A pure relativity of values is posited: any kind of use which
can operate according to specific standards will be allowed in any area. If a
certain type of establishment is not usually associated with a certain level of
performance than it is not automatically excluded so long as it can meet the
standards. Here indeed is the encouragement to improve old methods and devise
new methods and to establish an open ended standard so that new uses are not
automatically excluded from areas because not specifically allowed.

In addition to the relativism of this paper two other concepts which are
significant in the development of planning techniques are implicit. First,
O'Harrow might be credited with suggesting that an absolute segregation of land
uses is not a necessary hallmark of sound planning and zoning. Second, O'Harrow's paper would seem to suggest that the abstractions and colloquialisms that are so much in evidence in both planning and zoning documents must be replaced by a more refined terminology so that issues under discussion can begin to be understood and discussed in a scientific and objective manner rather than in the heavily subjective, connotative language that is presently used. In the fields of public health and of building control, for example, it has become recognized that experts are needed both to write the standards and to interpret them. Vague terms such as "pure" or "strong" have been replaced by specific and measurable ones. The result of this increased dependence on the expert with a resulting use of a more precise language has been a much greater flexibility of regulation with far less arbitrariness; these new types of regulations are doing a better job in achieving objectives toward which the controls are aimed than was possible with the older types. When the performance standard idea was accepted as the best way to write a building code many newer materials and methods of construction were allowed into the construction industry. This suggests that a greater flexibility of practice is the result of a finer technique of measurement. Our principal planning tool, the Master Plan, is supposed to be a more elastic document than the Zoning Ordinance yet it may be responsible for some of the rigidities that now appear to be hampering the planning process. One of the important reasons may be that for the most part this document is a "common-sense" document filled with the banalities and colloquialisms that are responsible for so much of the hazy thinking that marks our daily living. This vagueness and the use of empty abstractions may indeed be forcing us into patterns of thinking dominated by the forms of today rather than allowing for the use of the yet to be discovered forms of the future.
REFERENCES


4. Some of these criteria were suggested in Harrison, Ballard and Allen, *Plan for Rehousing the City of New York* (New York: City Planning Commission, 1950).


I. INTRODUCTION

This section will briefly analyze the way in which zoning is done and indicate trends apparent in both the administration of the ordinance and the way in which the ordinance is written. It is believed that in many offices "to plan" has become synonymous with preparing a master plan. The ordinance in many instances is either part of the plan or else it is considered a more or less direct translation of the land use and population proposals of the plan into a legal control device. In this sense, the ordinance is seen as the chief tool to assure development according to the plan and to inhibit development that does not conform to the plan.

It is rather remarkable to consider that although recent years have seen a revolution in zoning, the change over from so-called "Euclidian" to "non-Euclidian" zoning, "the assumptions of the master plan theory evolved in the 1920's...have persisted to this date."(1) Further, it may be even more surprising that recent years have seen but few attempts toward the creation of a single document that would be a comprehensive tool to control the total physical environment. For purposes of discussion then, this section will contrast the classic Euclidian ordinance with the newer non-Euclidian document.

II. THE EUCLIDIAN ZONING ORDINANCE

BASIC PREMISES:

"Euclidian zoning may be described as a system of use control through the demarcation of rigid districts, each with its own set of uses. This...system of zoning, which the reform movement of the early 1920's succeeded in establishing as the framework for the growth of the American city...achieved judicial support in the Euclid case ...."(2) While Mr. Justice Sutherland's opinion in
the case takes some cognizance of the view that zoning is a tool in effectuating a land use plan, a large part of his discussion is devoted to the view of zoning as part of the law of nuisances. This fact has been responsible for a climate of thinking that only recently has been regarded as an inadequate use of the zoning power.

The basic premises of the Euclidian ordinance are outgrowths of this fundamental concept of the rigidly defined use district. These districts are demarcated one from the other on the assumption that some uses are not compatible with others. A further extension of this view is that some uses constitute a higher use of the land than others. Simply, it is assumed that the characteristics of all land uses can be defined in immutable terms so that no matter what the circumstances of the particular case one can forecast which uses are and will be compatible. In short, it is assumed that the ordinance can list all the uses that are likely to locate within the area.

McKim Norton stated in a recent article that, "a first tenet of comprehensive zoning was and still is that it is possible to map an urban land area into districts in which a class or classes of compatible uses are permitted and uses incompatible with them are prohibited." The map shows all the use districts for which controls have been developed. The entire city is included in one or another of these compartments, and conversely, the uses allowed within each district of the city can be accurately located on the map which is part of the ordinance.

In drawing the map an important consideration is the existing pattern of land ownership. Frequently boundary lines between districts run along ownership lines. In the text of the ordinances it is made clear that the unit of measurement in these regulations is the individual lot. The regulations control development in each lot in terms of the standards which will be discussed below. The pertinent fact is that regulations might have been conceived on a district-wide or block-wide basis but that in fact neither of these alternatives was chosen.
Still another example of the way in which existing conditions were responsible for the basic premises of the ordinance was the establishment of the principle that those uses which would become nonconforming with the passage of the ordinance would be granted immunity and allowed to continue in use after the ordinance was passed.

During the preparatory work for the Zoning of Greater New York, fears were constantly expressed by property owners that the existing nonconforming buildings would be ousted. The demand was general that this should not be done. The Zoning Commission went as far as it could to explain that existing nonconforming uses could continue, that zoning looked to the future, and that if orderliness could be brought about in the future the nonconforming buildings would to a considerable extent be changed by natural causes as time went on.\(^4\)

A final basic premise should be mentioned and this was the extremely interesting development in enabling legislation which resulted "in the creation of an agency new to local government—the board of zoning appeals, an administrative tribunal with quasi-judicial and quasi-legislative powers".\(^5\) The creation of such an agency is significant in that it is an admission that the Euclidian ordinance is perhaps such a rigid document that on some occasions it may be necessary to deal in a more flexible manner with extraordinary situations which are not subject to the a priori judgments which the ordinance provides. Specifically, the board has the power to grant variances and exceptions.

THE STANDARDS

From such a view of the zoning power it is understandable that the standards used to effectuate the ordinance are neither subtle nor complex. Several assumptions were made which were to govern the writing of the standards: existing development must be protected, every use allowed in the community could be listed in the ordinance and the nuisance each would generate could be forecast. Further it was assumed that development would continue as a small scale, lot by lot, process. Also, it was assumed that special kinds of known uses could be dealt with on an ad hoc basis.

The assumptions led to the practice of controlling all development simply
by limiting the uses that might occur within any zone. Within each zone there were limitations on the height and bulk of buildings. The coverage of sites by buildings was further limited by prescribing yard and court dimensions. It was assumed that complex interrelationships such as density would be adequately controlled by limiting the building bulk: the assumption is that the relationship among different factors can be controlled by the limitation of but one of these.

III. THE ERUPTION OF THE REVOLUTION

THE PREMISES RE-EXAMINED

The beginnings of a change can be discerned when the suggestion was made that rather than being concerned with what a use is called, it would be more profitable to examine how it operates and what the adjuncts of this operation are likely to be. Each of the Euclidian premises has its counterpart in non-Euclidian terms.

In relation to use districts the newer trend shows a simultaneous development in opposing directions. While the Classic ordinance assured residential areas freedom from the intrusion of industrial and commercial development and allowed all uses within the industrial area (the "lowest" use of the land) the newer ordinance suggest contrary objectives. It is tacitly assumed that industrial land is at least as valuable as residential property and since the assumption still holds that these two uses do not seem to make good neighbors residential uses are kept out of both industrial and commercial areas. On the other hand certain non-nuisance industries such as watch manufacturing are being admitted into the formerly sacrosanct residential zone.

The map can no longer be counted on to show all the use districts in the community. The Tarrytown case established the precedent of the "floating zone" that settles down to a specific area when and if it meets the standards established for that particular kind of use. Commonly the garden apartment type of development is allowed within the more restricted residential areas if specific kinds of
criteria can be met: those relating to the minimum size of the unit to be developed, to coverage and density. Many communities have required that still other standards be met in relation to parking, minimum distance between buildings, landscaping and so on. Similarly, the special use district has come to be an accepted device which in fact is not shown on the map. As in the garden apartment type of development, professional offices, parking areas, and community shopping centers are allowed a good deal of freedom in choosing their location provided that they meet standards established in the ordinance.

This and similar kinds of developments have emphasized the fact that the urban landscape is less and less altered bit by bit, but rather that large scale developments are becoming more common. Because of this, zoning based on the individual lot as the development unit, a concept which is becoming obsolete, is being replaced by standards which relate to the total development area, that area being different for different kinds of uses. In a recent article William Vladeck speaks of the difficulties the architects of large scale housing projects encounter in trying to conform to an out of date ordinance which is based on the assumption of small scale development. (6) Since these large scale developments usually provide a higher standard not only of amenity but of rational land development, it is suggested that much would be gained if ordinances were more flexible in their assumption of the standard unit for official regulation.

Although in the pioneering period of zoning work it was assumed that "orderliness could be brought about in the future" in relation to non-conforming buildings, we have come to realize that this is indeed very far from being true. The monopoly situation of non-conforming uses has recently been appreciated. This fact has been met with the suggestion by McKim Norton that if these uses can meet standards established in the ordinance they may be permitted to remain, but if this is not the case than after a period of time during which their value is amortized they should no longer be given asylum. (7)
Finally, in terms of the basic premises, it has been suggested by experts in the field that the Board of Appeals be replaced by a Board of Experts. (8) Experience has shown that this safety valve has in fact become a serious leak in the body of law it is supposed to administer. Numerous critics have suggested that because of the actions of the Board of Appeals zoning by men seems to have replaced zoning by law. For example, Walter Blucher is quoted as saying at the 1955 ASPO meeting in Montreal:

The trouble is that zoning is becoming the rule of men rather than the rule of law. Fewer and fewer uses of property are permitted as a matter of right subject to standards. They are subject only to the discretion of a zoning board or a planning body. In most instances no standards are set up governing this discretion. As a result 50% of all rulings of zoning boards of appeal in the U.S. are probably illegal usurpations of power.

And, at the same meeting Dennis O'Harrow is reported to have said:

There is a serious question in my mind as to whether we are on the right track at all. We spend so much time administering a zoning ordinance. In spite of our best efforts the ordinance is illegally amended and shot full of holes beginning the day after it is adopted. All these facts indicate something is basically wrong with zoning. (9)

THE NEW STANDARDS

As a result of the re-examination of the premises basic to the Euclidian ordinance, it has thus been generally assumed that the new standards should operate by establishing ratios, formulas and series of relationships among uses. The new ordinance must not hold back experimentation in terms of new forms nor, for this reason, can it contain a list of uses which are allowed within each area. Because no prejudgments as to how a use will perform can be made, the new ordinance can only establish areas in which levels of performance must be met. Also, because of the re-examination of the unit of development it must become related to the type of activity that occurs and standards must be established on these terms.
REFERENCES


4. Edward M. Bassett, Zoning (2nd ed.; 1940), quoted in Ibid.,p.308


PART IV: SOME NEW URBAN PLANNING STANDARDS

I. DESCRIPTION OF THE PRESENT SYSTEM OF CONTROLS

Planners like to think that the master plan is at the apex of the community's control hierarchy. In areas where the mandatory referral procedure is in effect, the planners can indeed develop a sense of the significant role the master plan can play. In such a situation the planner is guided in his recommendations by the proposals in the master plan. In a similar way, private developers can assume that if a community has a plan they may be able to build certain kinds of projects in certain general areas. But for both the public servant and the private developer the plan is no absolute assurance: the plan does not have the force of law, it is a document that may frequently be overlooked in favor of present exigencies. (1)

In communities such as New York City where the planning department's recommendations can only be overridden by an extraordinary majority of the legislature, there is still no certainty that in fact the department's recommendations will proceed out of consideration of a plan -- in New York, for example, there is no master plan.

A still further difficulty in this area of decision making is that the plan's proposals may have but little to do with the desires of the people in the community. Therefore, even if the planning agency always tests its decisions against the master plan, the end results may be contrary to what the community may desire for itself in the future.

Finally, for the private developer a further difficulty is evident: the real control devices are the tax rate, the zoning ordinance, the subdivision ordinance,
the street control ordinances, the capital budget and the building, fire and health codes, not to mention special state regulatory measures that may apply to particular kinds of construction. These measures may be in conflict with each other and it is often difficult to know which regulation takes precedence. What is being suggested is that no clear cut hierarchy of control devices is evident so that the way out of this maze is a hazardous one, and frequently a matter of chance rather than rational decision.

II. AN ALTERNATE SYSTEM OF CONTROLS

From the analysis of the existing system of controls as well as the earlier zoning discussion, a series of problems has been suggested which should be solved by any proposal for an alternate system. It would seem that first in importance in this list would be the designation of the unit which is to be responsible for formulating and administering the control devices. We have seen that local control frequently leads to the problem of the rational distribution of the land resources in an area. It is suggested that a land use plan on a merely local level is an impractical instrument for meeting the needs of the inter-dependent metropolitan area. Essentially, land use problems are not local problems but regional ones. Local areas can zone poverty out of town, such as is the attempt in Wayne township, as well as prohibit obnoxious industries and such uses as hospitals and cemeteries. The last is, for example, excluded from the City of Berkeley. Nevertheless, on a regional basis these uses will have to locate somewhere.

The argument usually put forward is that local autonomy is more "democratic" than autonomy at a higher level. But, as Professor Verney suggests in his paper on metropolitical theory, this is merely an hypothesis, not a self evident or verified fact. He suggests that some cities which are not self-governed are more "democratic" than other cities which are. As an example he cites Washington, D.C. which is not self-governed and which has been able to enact more "democratic"
legislation on the part of its Negro population than most other southern cities. In short, we may have a semantic difficulty here: so-called "democratic" ends are not necessarily the result of a so-called "democratic" political structure, i.e., a local political body. In a similar way, in respect to planning legislation and activity, it is suggested that at a federal level one is very much more apt to find "democratic" idealism than at the local level where petty interests are more frequently expressed. Therefore, it is suggested that instead of the local unit of government a metropolitan council is preferable for both land, planning and control purposes. Planning and control on a merely local level assumes each community to be an isolated unit with no concern for the other communities around it whose own decisions may in turn radically effect those that can be made by the local area.

In terms of the adjudicative process discussed above, an area larger than a local municipality suggests itself by necessity. For true adjudication to occur among diverse interests it is axiomatic that the theater in which the conflicts are resolved must be large enough to contain all the actors. An example should serve to illustrate the point. The town of Emeryville, California has decided that its chief goal is a low tax rate. One may presume that from the adjudicative process among the diverse interests within the town this decision was reached. However, the effects of this decision extend far beyond the confines of the town's limited land area. From this major decision subsidiary ones were reached: no schools would be built in the future nor would any more community facilities be provided; any type of industry would be allowed to locate within the town without requiring any control over its performance. The effect was that the citizens of Emeryville use the schools and community facilities of neighboring towns without contributing taxes to these areas. Similarly, the smoke pall from the Emeryville industries hangs over all the neighboring towns which have required much stricter control of industries within their own areas.
Having settled on the unit of control, the next task is to ascertain the ends toward which the control devices are aimed. It was suggested above that if a community has a master plan this serves only as an advisory document and does not have the force of law. The aims and objectives of the plan are therefore of little real consequence in either the writing or the administration of the codes and ordinances that do serve to shape our environment. There is no guarantee that these mechanisms are in any way related to the goals that are expressed in the plan. Therefore it would seem that somehow what is needed is to give legal status to the community's goals in light of a survey of its resources, an analysis of these resources and a statement of the alternatives the community can choose among before deciding its direction in the future. We will call the legal expression of the community's goals its constitution.

The next requirement is that a clear hierarchy is established among the laws which will control the environment. For this purpose three levels of the law are suggested. Each level controls a successively smaller portion of the total environment. However, the document as a whole comprises a unified approach to the problem of having the laws which govern the environment related to the expression of the goals set for the future of the area. This unified document makes possible a vastly improved inspection system since each level is responsible for a total relationship. For example, the lowest level is concerned with the relation of the parts of the building to each other and to its occupants. There are no separate visits by the building department, the health department and the fire department. Instead one visit by what may be called the department of environmental control inspects the entire building to determine if it has established a set of relationships that can be tested against the constitution. In this way we would achieve a relationship among all the regulatory codes which at once would insure that they were related to each other as well as to the community's goals. The establishment of the hierarchy among the controls makes a more rational administration possible than the present single level of control devices.
The last requirement for an alternate system would seem to be that it provide more flexible standards than the specification codes that prevail for the most part. This unified system of laws which is in direct relationship to the statement of the community's goals, establishes an ideal framework for the use of performance standards. Each level of the law has certain objectives which it tries to encourage. Therefore, with such a general statement of aims at each level a more specific statement of goals becomes the framework for the laws. At each level of the law the standards are phrased in such a way as to suggest the relationships that should obtain and the way in which these are to be achieved should then become more a matter of choice than of directive. This emphasis on performance standards is essential to the system. The constitution is, in effect, the general performance code for the community. Each level of law suggests, in a similar way, the kind of performance that is desired, and, within each level of the law this same uniform approach is carried out. It is to be hoped that one of the end products of this attitude will be the creation of new forms in the urban environment which will satisfy people's needs better than the outdated forms that now dominate the urban scene.

III. DESCRIPTION OF THE CONTROL PORTION OF THE ALTERNATE SYSTEM

THE CONSTITUTION

The constitution of the metropolitan government is the community's statement of what it considers its "general welfare" to be in light of previous discussion by the citizens. It is believed that after a technical staff has done a survey and analysis of the resources of an area the findings should be presented in terms of a series of alternatives among which the community as a whole should choose. These choices should then be arranged as goals the community wishes to attain, and as policy statements which would suggest the general means used to achieve these ends.
Process of Goal Determination

- survey
- analysis

Decision Making

DIAGRAM OF THE PROPOSED SYSTEM

The Legal Document

THE "CONSTITUTION"

statement of goals

Formulation

Challenge

THE "LAWS"

1. Adjudication among all interests
2. Adjudication among adjacent users
3. Adjudication among individuals and the general welfare
For example, a metropolitan area might have to make the decision as to whether it wanted to become completely decentralized with a more or less even population density spread around the entire area, such as is happening in the Los Angeles region, or alternatively, whether it would prefer to be made up of a series of satellite communities. In the recent report to the Bay Area Rapid Transit Commission prepared by Parsons, Brinkerhoff, Hall and Macdonald, for example, one of the basic premises was that the Bay Area would consist of two major centers, San Francisco and Oakland, and a series of satellite communities which would act as sub-centers for the people's needs. One of the basic premises for the County of London Plan was a similar pattern. This major decision, or principle, would then lead onto other important decisions such as the role of rapid transit in the community and the general plans for the location of commerce, industry and population densities.

The constitution, it was suggested, acts as a document against which policy decisions at a lower level can be determined. By way of illustration: a metropolitan area has decided in favor of satellite development. One of the local communities decides to abandon its central library in favor of mobile library units. A citizen brings a case up against the local community because of this action. Weighed against the constitution it can be seen that the local community would be reinforcing a pattern of decentralization rather than one with functioning, definite centers. In this case the citizen would probably win his case on grounds that he was being deprived of his constitutional privilege to enjoy a large library at a central location rather than the more limited resources of these small and scattered libraries. Similarly, if a subdivision consisting of large estates averaging, let us say, three acres was proposed in a satellite community, it could be shown that such development would be wasteful of the land which was judged suitable for more intensive use. In short, since the constitution is the total community's statement of what it believes its general welfare to be, each unit of development can be measured against this yardstick.
A final example should serve to illustrate the nature of the constitution, the case of Beach v. Planning and Zoning Commission of Town Milford. Supreme Court of Errors of Conn., Mar. 9, 1954, 103 A. 2d 814.

Plaintiff is the owner of a 100-acre farm in Milford, Connecticut. In 1952 he agreed to sell 50 acres, provided a subdivision would be approved. It was proposed to subdivide the 50 acres into 145 building lots. The proposed subdivision was disapproved. The property lies in a residential zone.

The reasons given by the commission for the rejection of the subdivision are as follows: (1) This land is adjacent to a new development which will contain 79 homes. (2) The council has stated that the financial situation of the town is such that no schools could be built in this area for some time. (3) The additional police and fire protection which would be needed in this area cannot now be provided due to the financial situation of the town. (4) The report of the school superintendent shows that the new school in this area will be inadequate to provide for the children already living in this area soon after it opens.

The lower court overruled the planning commission. This was affirmed by the supreme court of errors, which held that the commission has the power to disapprove a subdivision solely by virtue of the authority conferred upon it as a municipal planning commission. The court said that a planning commission may neither approve nor disapprove of subdivision plans until after it has adopted regulations to guide it in its approval or disapproval. The court said that there is nothing in the statute which authorizes regulations prohibiting the subdivision of land because it would place additional financial burdens upon the town. The court said further: "In the third place, even if the statute had given the commission power to legislate in this regard, it would not follow that the commission could, in one isolated case and without any standards to guide it, disapprove a subdivision for a reason which it would not be required to apply to all subdivisions as to which the same reason obtained. Such action would be special legislation of the worst type. It would amount to the substitution of the pure discretion of the commission for a discretion controlled by fixed standards applying to all cases of a like nature. It would deprive the applicant of his property without due process of law... The action of the commission in the present case was not one taken in accord with any standards established for its guidance." (4)

It is apparent from the reasoning of the Commission that what they had considered the town's general welfare was being threatened by this proposed development. If the commission had been able to refer to a constitution which stated the area's conception of what it believed its general welfare to be, and could also refer to the laws which stated the standards which must be satisfied before development could take place, then their case would clearly have been a much stronger one. It is interesting to note in this connection that in the State of Washington the statutes give power to planning agencies to disapprove
subdivisions that are not in the public interest. But since the decision as to what constitutes the public interest is capable of the widest interpretation, it is believed that a clear statement of the community's decisions will greatly aid in the interpretation of this idea. The Beach case is a clear illustration of the need for standards in the adjudicative process. Here, standards which regulate the timing of development within the town's area are obviously required to avoid "special legislation of the worst sort."

It will be noticed that a map was not mentioned as being part of the constitution. It is believed that when a plan is presented as a map the planning process as such tends to be overlooked. As Henry Fagin has suggested:

The evolving demands on urban planning already have forced a shift in focus from the map to the program of action. The ultimate master plan map as the goal of planning is being replaced by a 'planning process' conception in which the master plan is regarded as an open-ended sequence of plans describing at each successive point in time a desirable equilibrium among every-changing activities....Necessarily, this conception of urban planning involves coordination in time as well as space, of programs as well as land areas. ....Static space coordination is not merely inferior, it is impossible in a dynamic world.(6)

THE LAWS

The laws are the standards which must be met in order to allow development to occur. Whenever possible they are phrased in terms of the goals that should be achieved by the proposed development. Usually, they are expressed in terms of relationships. The laws are divided into three sections: the adjudication among all interests, the adjudication between adjacent users, and the adjudication between the individual and the general welfare.

Adjudication Among All Interests: The Diagram

A diagram of the ways in which the land area is allocated is included under the first section of the law. This is not a land use map. It only shows zones of permissible disturbance. The criteria in evaluating disturbance are related to the measurement of air pollution, noise generation, emission of artificial light, traffic generation, vibration, odors, fire and explosive hazards and heat.
If it becomes apparent that still other factors should be scrutinized they would also become part of this list.

Each disturbance has a letter assigned to it and a range of weighted numbers. Each zone is similarly assigned a range of numbers and letters. If a particular development, for example, scores high for only one characteristic like noise, or traffic generation, then although the total score may not be high, the letter combination is such as to qualify the development for location only in the zone of most permissiveness. Another development may only earn a high score for emission of artificial light. If this light emission occurs chiefly during the daylight hours, then this use would probably be allowed to locate within the zone of least permissiveness.

Within the zones there would be a gradation of letter locations so that although a use has a high score as a result of low scores for several factors, it may have a peripheral location within the zone because of the nature of those factors. This is suggested as a way of making boundary problems less irksome.

No prior permission for development exists. To get permission to develop property an IBM card must be filled out by an architect or engineer which would indicate how the use will perform in relation to the factors listed above. The total performance is scored and the number and letter assigned is equivalent to permission to build in a zone with that number and letter combination and that zone only. Uses which score low may not locate in zones of considerable permissiveness. Only roughly equal degrees of disturbance may be adjacent to each other.

It should be emphasized that the relationships established by this system are equally valid for vertical as well as horizontal juxtapositions. Zoning can be carried out on the section as well as the plan. It can also consider the separation of disturbances in time. A concept of daytime-nighttime zoning can thus be evolved which may allow for the intensive use of certain areas throughout the 24 hours of the day.
It may be suggested that the chief difficulty of this system would be its administration. To meet this criticism, at least partially, several points should be made. First, a metropolitan area is more able to hire highly trained technicians to administer the laws than separate municipalities. Second, there may be some objection to the technicality of the card that the developer must fill out and for the need to have a trained person do it for him. This should offer no real difficulty: the state of California requires that only architects design schools. The assumption is that the school is such a complex and important building that only a trained person is allowed this responsible job. Third, the private developer would be well advised to have the card filled in accurately because if on inspection a discrepancy was to be found, the use would not be permitted to continue until the disturbance was brought within the required standard. It would be similar to the way in which a building inspector works today: if he finds that a beam deflects too much, then the building is not allowed to be used until this matter is corrected. The inspector would have to be satisfied that the correction would yield permanent rather than temporary results. If the problem was, let us say, smoke, then the proper fuel burning equipment correctly installed would have a permanent effect if the equipment did not deteriorate in use. Such a guarantee during usage is assumed, for example, in the field of electrical equipment which has been previously inspected by the Underwriter's Laboratory.

Adjudication Among All Interests: The Written Statements

This part of the law will state the relationship among the various land uses as well as stating how the water and air rights are to be used. To illustrate how these might be written two examples are chosen from an existing master plan. The examples are not considered ideal statements but merely suggestive of the general way in which this could be done. The first example relates to the development of commercial areas in the city of Berkeley:
The number of zones and their relative position to each other is to be determined by conditions and decisions made in each metropolitan area.
1. Commercial areas should be separate from but convenient to industrial and residential areas;
2. Commercial areas should be accessible to but not located immediately on major thoroughfares;
3. Commercial areas should be concentrated clusters of stores rather than ribbon developments along arterial streets;
4. Several types of commercial districts should be established so that each contains businesses or services which are compatible with and complementary to one another; ...(7)

The second example is also from the Berkeley Master plan and is a statement of the Commission's policy in relation to the development of trafficways:

1. Trafficways should provide adequate access to--
a. all areas within Berkeley such as homes and stores and places of employment; and
b. all areas within the San Francisco metropolitan region by convenient connection to regional trafficways
2. Trafficway proposals should be coordinated with existing and planned trafficways of adjoining cities, the metropolitan Bay region and the State.
3. In the interest of safety and efficiency, trafficways should be routed around rather than cutting across residential neighborhoods and commercial and industrial areas.
4. Trafficways should be designed in such a manner as to avoid the creation of isolated areas or pockets of land for which there is no suitable use.
5. The planning of trafficways should be thoroughly coordinated with the planning of transit facilities. Trafficways designated as transit routes should be designed to accommodate public vehicles without interfering with traffic flow. At points of unavoidable conflict, priority of movement should be afforded to transit vehicles because of their higher passenger capacity.
6. Berkeley's trafficways should encourage--
a. the centralization and continued development of the Berkeley Central District,
b. the development of suitable concentrated local shopping centers, and
c. the routing of non-University traffic on thoroughfares which by-pass the congested area in the immediate vicinity of the University of California ... (8)

A third example of how this law might work is a hypothetical example which relates to recreational areas. A formula could be established which would state that the amount of recreational space should be directly proportional to the number of leisure hours of the total population and to its distance from that population.

Adjudication Between Adjacent Users

The laws which apply to development within each zone are established to restrict particular developers so that present or future uses may enjoy the same rights.
These rights would vary between different zones. The control devices employed to insure these rights would include:

1. Floor Area Ratio
2. residual light on adjacent building envelope (this control device is explained in Appendix A)
3. performance fire codes affecting flammability
4. disposal of wastes (solid, liquid and gaseous)
5. performance building codes for external walls, party walls, etc.
6. a ratio between parking space and users
7. access regulations

Adjudication Between the Individual and the General Welfare

The laws which apply to development of the individual property are established to protect the users within that property. The assumption is that present users may not harm either themselves nor may they establish conditions which are harmful to future users of that property. The control devices would include:

1. occupancy standard
2. illumination levels within habitable areas
3. ventilation and heat standards
4. performance codes affecting flammability and escape
5. sanitation codes
6. performance building codes
7. standards for usable open space

THE SYSTEM OF REVIEW

A developer who objects to the rulings of the laws has the right to challenge these against the constitution. If he can meet all the conditions of the constitution then he may be permitted to develop in a way not suggested within the laws.
Periodically the community itself reviews the constitution and can choose to amend it in light of changing physical and technological conditions and the changing social structure of the community. Similarly, if a developer believes his project to be in the best interests of the community he can appeal to the metropolitan government for an amendment which would permit this type of development to occur.

Finally, during the period of the annual review of the constitution the capital improvement program is also to be written. Any extraordinary expenditure may be sent up to the constitutional reviewing body for consideration before the program is granted approval.
REFERENCES


6. Ibid. pp. 298-299.


8. Ibid. pp. 67-68.
PART V: AN APPRAISAL OF THE SUGGESTED SYSTEM

I. INTRODUCTION

Since the previous analysis was concerned with an evaluation of recent theory and practice and concluded that an alternative system was urgently needed, it seems only proper to subject these proposals to the same criticism that was applied to the current scene. For this reason this section will deal with two problems. Firstly a possible administrative set-up under which the proposed system could operate will be outlined. This problem must be considered first because no matter how rational a proposal may be, it remains of but questionable value until a method of effectuation is also suggested. Secondly the problem is to show to what degree the criteria established in Parts I, II and III are satisfied by the proposed system. If the earlier analysis was to have any reason it was meant to suggest the difficulties that would inevitably be encountered by those planners who might be earnestly dedicated to the improvement of the environment. Since the proposed system was aimed at correcting many of these difficulties, some analysis is needed then to show how well it has succeeded in its aim.

II. A POSSIBLE SYSTEM OF ADMINISTRATION

Two alternative systems of metropolitan government can be suggested. The first is the so-called two tier system. A central authority forms the first tier and it controls specific area widematters while the second tier, consisting of cities, towns or boroughs, keeps its local autonomy in many other functions. This is the system in use within the metropolitan government of Toronto. Nevertheless, in discussing this rare example of a true metropolitan government, the eminent political
scientist William Robson has to conclude that at best the Toronto system is but an imperfect compromise between the existing status quo and the true might-have-been. Prof. Robson says that although Toronto is certainly a step forward in the kind of consolidation that the area requires, nonetheless the division of powers and duties is not as rational as it should be. (1) Unfortunately Prof. Robson does not suggest how a more rational system of metropolitan government would distribute its powers. (2)

The second is the one tier system. For various reasons which will be discussed fully below this kind of system has been chosen since it seems a more effective alternative. The one tier government is a single central authority in control of the metropolitan area's affairs.

Its structure could be somewhat as follows. At the head of the government is a trained public administrator of the city manager type. He is supposed to be above partisan considerations. The Council has, let us say, one hundred members. Of these sixty are chosen at large and forty are chosen by local areas on a population basis. It can be seen from this proportioning that it is believed that area wide considerations should take precedence over merely local ones. Within this structure committees will be responsible for much of the drafting of the legislation. Standing committees will include those dealing with a particular branch of administration such as schools or public health as well as those dealing with particular geographical areas of the metropolitan region. Legislation which requires special knowledge of an area, such as let us say sub-division control, will be dealt with in the first instance by the area committee and comes up only thereafter for a vote before the council. Local matters are thus considered at both levels and can be fitted into the framework of the general welfare of the metropolitan area as a whole. Matters which are not primarily the concern of a particular area are dealt with by the relevant committee of the council. These committees in turn do however have among their members some local area representatives. In this way local considerations are not lost sight of neither are they allowed to warp or subvert the welfare of the metropolitan area as a whole.
Area committees also have the right to initiate special legislation that would apply only within the specific area provided it is approved by the council as a whole. For example, because of certain natural conditions coupled with the growth of a section of the metropolitan area it might seem proper that a large parcel of land should be acquired by the metropolitan council as a regional park. The representatives of that section of the metropolis may initiate legislation that this be done. Alternatively if it is initiated by the parks and recreation committee, they would first ask the opinion of the area representatives concerned before proceeding with the matter.

When bills become laws they apply uniformly over the entire metropolitan area unless area members have suggested reasons which were acceptable to the council why their area should be exempt from the law or why it requires some special legislation.

It is assumed that a permanent civil service is responsible for the administration of the council's decisions. In Planning, for example, the departmental head is responsible to the council's committee on planning. It is essential that both the committee has a clear picture of how the day to day problems are met and that the department is kept informed by the committee on decisions of other committees such as the finance committee so that the proper administration of the laws and policies of the council are constantly the concern of the department.

It will be recalled that the system proposed in Part IV suggested the use of the initiative by groups of citizens who think that the constitution no longer precisely represents their opinion as to what the best interest of the community is. As is usual in the use of the initiative, if a given percentage of the voters propose a constitutional amendment or a change in some ordinance they can require that the change be submitted to the people at either a general or special election. If the question gets a majority vote at the election the change will go into effect. It
is also suggested that certain kinds of matters must be submitted to the voters as a required referendum. The kind of matter that would be involved would obviously have to be that which had to do with fundamental changes in either the constitution or the laws. However, the council would also use the optional referendum when in doubt or uncertain as to popular opinion on some other measures. By the use of these devices it is hoped that a bond of responsibility is forged between the representatives and the citizens to keep each other informed. But as most of these matters are group matters it is also believed necessary to allow individual citizens to appeal administrative decisions to the council and a regular machinery for this process should be instituted.

Now, it may be argued that the metropolitan government is too large a unit to allow for such extensive interchange of private citizens' views and complaints and also to make certain that the proper business of the council is carried on effectively. For this reason the metropolitan government is divided into service regions so that if one wants to complain about refuse collection or street paving, for example, there are local offices where the complaints can be lodged. These local offices can be, as it were, the area office of the standing committee so that if a large number of complaints of a single kind are registered in any one area then the council will be made aware of the difficulty which may call for a fundamental reform in legislation.

The council as a whole is responsible for the form of the constitution of Part IV. The laws are formulated by the civil service departments who are the servants of the council. From the departments the laws go to the proper committee of the council in which they are discussed in conference with the technical advisors who wrote them. The committee then recommends the laws as they are or suggests changes and they are voted on by the council as a whole before they become effective legislation to be administered by the civil service departments.

Finally, having outlined the system of government it would be useful to review
the kind of substantive measures the government would be concerned with to decide whether in fact the single tier system is a better instrument of government than a two tier system might be. For this reason a brief listing of some of the duties of present day municipalities are suggested to help us to decide whether the single central authority is more suited to carry out these functions or whether some functions should be allocated between local and metropolitan authorities. It is of course understood that the functions of local authorities depend on the different state constitutions or on the terms of the charters of different cities, nevertheless it is possible in a general way to suggest the present day duties of local areas. 

POLICE: It is generally assumed that the prevention of crime and the regulation of activities like traffic are the chief police duties. "In what may be called Greater Chicago there are 350 regular and 350 private forces. No member of one police force will act within the jurisdiction of another and there is little cooperation." (4) This kind of statement certainly suggests the folly of local area rather than metropolitan area wide police force. Even in the matter of traffic regulation it is clear that the control of the flowing traffic stream on either side of a municipal boundary requires carefully coordinated planning if chaos is not to result.

EDUCATION: Ad hoc school boards are usually responsible for the administration of elementary education. Colleges, universities and junior colleges are frequently administered at a municipal level. Yet it has become increasingly clear that these small units of government are unable to meet their financial problems. The fact that federal aid to local units has recently been discussed at a national level points to the need of the administration of education at a higher level than is now usual to help financially and to promote the kind of equality of opportunity for a high standard of education which is the cornerstone of a functioning democracy.

ROADS: Cities, counties and the federal government share responsibility for a highway system and one would be hard put to find anyone who believed that local
control is more fit to take on this responsibility than the wider metropolitan area.

PUBLIC HEALTH: This heading would include hospitals, visiting nurses, various inspection services such as of food and drugs, severs, collection and disposal of refuse, notification of infectious diseases, condemnation of unfit dwellings, as well as study and research on prevention and cure of disease. From the financial point of view it is hopeless to expect small units to be able to furnish the kind of services that our complex society requires either in the way of public education, research, treatment or adequate inspection services. From the point of view of prevention, clearly disease is no respecter of municipal boundaries and care and cure obviously require full scale marshalling of the total resources of an area to meet any public health threat. Metropolitan control seems unquestionably to be a necessity in this field. Even in the matter of the collection and disposal of refuse, since it is essentially but one operation, it is easily understood that how and where refuse is disposed of is an active concern of the entire metropolitan area. Similarly, if inspection shows some foods to be of questionable purity it becomes a matter of widest public concern and artificial administrative boundaries do not change the nature of the problem.

HOUSING: Municipal responsibility in the housing field usually consists of building public housing for lower income groups. It is to be expected that loans and grants for housing purposes will become increasingly more common in our country as they are in Great Britain and several European countries. Difficulties in this field run from the financial inability of small units to help relieve the urgencies of the housing need to the problems of siting in relation to both local amenities and places of work. It is not uncommon for a municipality to refuse to take on this responsibility with the result that those municipalities in a metropolitan area which attempt to do something about this problem become swamped by the population which
is not being served by its own municipality. This kind of problem arose in the San Francisco Bay Area when some of the cities refused to take on the responsibility of rehousing those former war workers whose housing was no longer the concern of the federal government. The result was that the few cities which tried to cope with the housing problem could do but little to solve what should have been the responsibility of the entire Bay Area.

RECREATION: The provision of parks, beaches, stadia, sports grounds and similar recreational facilities has in some instances been done very well by municipal authorities. Nevertheless this does not suggest that the local authority is the most suitable body for the provision of these services. It is unquestionably true that people from the entire metropolitan area share the use of specific facilities which may be located in one municipality or another. The development of large natural reserves has frequently been done by units of the federal government or by ad hoc regional park authorities. Yet the important problem of reserving land for public use, and the related problem of the development of those natural resources which are of great recreational value must undoubtedly be done on a large area basis. Finally, if the siting of parks is to be done most sanely it must be coordinated with the local roads, public transportation and population densities, all of which can only be meaningfully controlled on a metropolitan area wide basis.

PUBLIC UTILITIES: Four kinds of services - the supply of water, gas and electricity, and public transportation - are generally considered to affect the public interest. Except for water, municipal provision of these public utilities is not yet common but is gradually making its way. Therefore in respect of these services one would only like to suggest that large scale generation, distribution and planning of networks is obviously much more rational than piecemeal planning.

LIBRARIES: A great difference in standards of service are noticeable between one city and another. A single large rich library system is unquestionably of greater value than many smaller local library systems. This is true not only in terms of assembling a collection but the quality of the service can also be superior in a
large unit. A single central catalogue is of inestimable value to the serious student as well as to the library staff in assessing its collection. One can assume that many branch libraries will exist but the services of the central branch are essential for a really good library service to develop.

LAND PLANNING: As each of the functions described above has also some influence on land planning the arguments in favor of metropolitan organization need not be rehearsed again here. In any case metropolitan land planning has already achieved a degree of "official" acceptance through such studies as the recent San Francisco-Bay Area Rapid Transit Report.

It can be seen from this most cursory analysis that the varied demands made on local government units by our exceedingly complex society can best be satisfied by a unit larger than the municipality. And as "no man is an islande" so too, we have come to see the functional interdependence of the local units of government. In short, the analysis has reinforced the notion that a single central authority would seem the most effective governmental unit for the discharge of the functions mentioned.

It has been argued that centralization of authority leads to totalitarianism and that local government, or a federation of local authorities is more "democratic". We have come from a tradition which in the words of Lord Bryce believed that "the best school of democracy and the best guarantee for its success, is the practice of local self-government." (5) He believed as many do today that local government creates "among the citizens a sense of their common interest in common affairs and of their individual as well as common duty to take care that those affairs are efficiently and honestly administered." (6)

Surely, one must admit that to tie labels like "democratic" or "totalitarian" to a system because it bears the merest superficial resemblances to other systems is to be guilty of spurious reasoning. First, one must define what a "local unit" of government is. To Lord Bryce and to John Stuart Mill before him who "supported local government because it was a readier method of public education than taking
part in national affairs"(7) the local government unit was small in area and pop-
ulation and was capable of providing some fundamental services. It should be under-
stood that the orbit of local government for both of these men was limited by the
level of communications that they had to depend on. Today, if we define the local
unit as that area in which the family's daily round of activities occur we become
aware how very wide it is if we merely try to include work, homelife and play. In
fact, one becomes aware that the local municipality rarely satisfies these most
elementary requirements and it is the metropolitan area as a whole which one must
regard as the local unit.

The second problem that must be answered in relation to this single large central
authority is the claim by Lord Bryce and others that the local unit of government
is "the best school of democracy." This statement implies that it is a school with
but minimal truancy since all the qualified students are anxious to participate as
much as possible. In this connection it is interesting to note election figures and
to compare the percentage of qualified voters who vote in local elections with the
percentage who vote in national elections. For this purpose a few comparisons are
made from recent English and Scottish election returns.

In the General Election of October 1951 78.3% of the qualified voters in London
went to the polls.(8) Six months later, in April 1952 only 41.0% of the same group
bothered to cast their votes in local borough elections.(9) Roughly, one might say,
there was twice as much interest in the national as in the local elections. In the
first week of May 1951 it was reported that in the municipal elections (excluding
London) "polling was generally low throughout the country, particularly in Scot-
land, where in Edinburgh only 30.5% of the electorate went to the polls and in
Glasgow only 36.7%."(10) Yet in October of that same year 81.9% of the Edinburgh
electorate cast their votes in the General Election,(11) or one might conclude there
were nearly three times as many people interested in national elections as in local
A final set of figures compares the returns in London in 1955 when 32.4% of the electorate voted in the London County Council elections during the first week of April (12) as against 67.1% in the General Election a month later. (13) One can only conclude from this kind of data, which is by no means peculiar to Britain, that local government does not seem to capture the political interest of its citizens. The same conclusion is suggested by the circulation figures of metropolitan area newspapers when compared to the local newspapers which are invariably read by but a small percentage of the local citizenry. Therefore, the conclusion must be drawn that if local politics are not as interesting to people as the politics of larger areas then in fact a single metropolitan government is apt to generate much greater interest and participation than local government or a federation of local governments. Surely, this greater participation is the mark of a more rather than less democratic government. And if we believe as John Stuart Mill did that "that form of Government was best which developed the best citizens" (14) than it would seem that today a larger than local unit would seem to be that form.

It has also been suggested that such a central authority is more apt to become totalitarian than small local authorities with their diversion of power into many more hands. The reasoning seems to be that since totalitarian governments are highly centralized then any government which is highly centralized is apt to become totalitarian. It is interesting to point out in this connection that Germany, Italy and the Soviet Union all had strong traditions of highly organized local government yet they became totalitarian while France, probably the most centralized country in Europe whose capital city does not even govern itself, did not become totalitarian. To say that a particular governmental structure leads inevitably to a particular political form is not correct reasoning. The distinguishing mark of a non-democratic government is the breakdown of communications between the people and their leaders. When the people cease communicating with their representatives than this
can become the first step towards irresponsibility. The proposed system has tried to suggest ways of bridging the gap: the use of the initiative, the referendum and for similar reason the use of the recall may serve to keep both the officials and those who elect them in closer touch. The right to disagree, to criticize, to be a member of the opposition these are the signs of true political democracy rather than a central or local authority form. However, as pointed out earlier, the presence of a single responsible central authority will undoubtedly provoke more interest than the picayune affairs that would make up the business of smaller authorities. We have seen an example of this in the examination of the voting records.

The last argument usually put forward in favor of local government is that it offers many more people the opportunity to directly participate in public affairs than a larger central authority can. One can only reply that the quality of participation is surely far more important than mere numerical opportunity. However, of all the "great cities of the world" has the largest number of citizens in what is equivalent to our city council(15) yet the quality of the experience is such that few would say that the city government offers great opportunity for schooling in democracy.

III. CRITERIA FOR THE PROPOSED SYSTEM

The analysis in Parts I, II and III suggested certain flaws in the present method of planning which should be eradicated by any proposal if the aim of a more satisfactory environment is to be achieved. Implicit in the proposals of Part IV was the suggestion that the flaws pointed out in the present system would be corrected by the judicious application of the proposed system. This section will therefore try to show how the criteria suggested in the earlier sections are met by the proposed system.

The inquiry began by an examination of the definitions of planning and found the negative approach so much in evidence today wanting. It was suggested that a sounder
approach would be to define planning as an adjudicative process between the freedom of the individual and the safety and well being of society. This definition is essential to the understanding of the proposed system. To arrive at the kind of adjudication which would balance the rights and duties not only between the individual and society but between segments of the larger society it is believed necessary to have as many of these affected interests participate in the government as possible. At the present time we recognize the fact that an economic, social and cultural interdependence exists among the sections of the metropolitan area yet we have given no political recognition to these facts. Therefore it would seem that a political framework which acknowledges this activities framework would result in an awakened political consciousness among those who now have their loyalties divided among their place of residence, work and leisure activities. For these reasons as well as the basic unity of the land resources in a region, metropolitan government is basic to the fruition of the goals of the system.

The second major problem dealt with an examination of the goals toward which the planning process is oriented. It was suggested that an enlightened citizenry was needed for more active participation in the formulation of goals. Here again the proposed system has tried to solve this problem by suggesting that if real participation by an "enlightened citizenry" is to take place the political unit must be such that "real" issues and interests are aroused. It was shown in the previous section that one can only expect this kind of interest from a metropolitan rather than local kind of government. Further, the system itself calls for the use of the initiative in the formulation of goals. Unlike current practice, the results of the technicians survey and analysis is presented as a series of alternatives from which the citizens can choose among. If the technicians have not suggested goals which the people think are worth while they can suggest still other alternatives for consideration. These goals are then given legal status, it was explained, so that any governmental action can always be measured against the stated community
goals. It is believed that this kind of emphasis on community objectives is very different from the kind of planning which merely tries to make the best of a poor situation. This suggested process can act as a stimulus to greater activity than the kind of planning which is merely ameliorative. To further emphasize the importance of goals which are clearly stated for public examination, the laws themselves, it will be remembered, are written in terms of goals and objectives rather than as specification standards which state the precise way in which things must be done.

In the first section it was stated that the great dilemma that must be faced was how to maximize freedom under planning and how to encourage creativity and ingenuity in meeting the varied needs of our society. It is believed that when the laws are written in terms of democratically arrived at goals and no regulation exists merely because it is a statement of the traditional way of achieving a desired end, then indeed creativity will be encouraged. When citizens can clearly understand the structure of the law and see how each action is in fact an interaction with society then greater responsibility will be the result.

The fact that the constitution can be challenged in terms of representing the best current thinking is felt to be a valuable stimulus to participation in government. But, it is believed that since the individual citizen will generally be more interested in the workings of the laws than in the principles that are the constitution there will be great opportunity offered for participation at this level since such a great variety of interpretation is possible.

The question of priorities and programming was also discussed in the earlier section. It is believed that a good deal of the confusion that arises in these areas is due to the fragmentation of authority even on a local basis. The suggested system relates all the activities that are responsible for the regulation and control of the physical environment in a coherent manner so that both citizens and officials can understand the reasoning behind the laws as well as the relationship that exists among the laws. Thus, the process of striving toward known and clearly enunciated
goals emerges as a single process rather than piecemeal activities by many different authorities. When such a conception emerges then the process of deciding among the different programs is simplified as is the order in which the programs ought to proceed.

In the discussion of how values influence form, historical examples were cited as well as the limited visions of the partial utopians. A different form from the usual stereotyped one was shown to have as much validity as the more usual one but finally this too was rejected with the suggestion that out of each society a new form must arise. Therefore to settle on one or another form as the final solution for an evolving area's problems was to be guilty of the worst kind of oversimplified thinking. For this reason the system does not include a final "master plan" land use map. It was suggested that many land uses as we know them today may take on unfamiliar forms, or their land requirements may alter, or the way in which they perform may change. Similarly, new and unfamiliar functions with not yet known characteristics will probably also come into existence. Yet there are undoubtedly certain degrees of disturbance which should not be close to other kinds of disturbances. Land use as such is not mentioned here so as to allow for the changed performance of known land uses and to allow the unfamiliar a place in the scheme. This kind of reasoning, it is hoped, will promote the search for the kinds of relationships among land uses that are more properly the concern of the planner than is the designing of "a plan" for an area. In short, it is believed that the system rescues the planner from the messianic role he has tended to see himself in and suggests that it is essential that he abstain from the authoritarian approach which suggests that there is only one best way to develop the area.

The latter sections suggested that as zoning witnessed a movement away from hard and fast specification standards in the direction of performance codes so too ought this to be the direction in which the entire planning process should be cast. An attempt was made in this direction by the proposed system. It was explained earlier
that the constitution was conceived as a kind of general performance code against which the laws and their administration could be measured. Whenever possible the laws too were conceived as performance standards so that in almost all cases the objective would be stated and the particular way in which it would be achieved was to be left up to the individual. It should be admitted that three difficulties exist at this level. The first is that a great deal more technical research must be undertaken so that when a law states that, for example, a specific level of illumination must be achieved in a room we must previously have detailed knowledge of the illumination levels required for different tasks. Yet, this involves a further difficulty: if a specific illumination level is met within a building, what happens when the use of the building changes? Under the system if a different use wants to occupy a building within an area it is allowed to do so if the degree of disturbance it creates is within an allowed range. Yet, within the same range of disturbance there may be uses whose illumination requirements differ vastly. Tentatively, it can only be suggested that if there is no way for the use to meet the required standards then it should not be allowed the use of the building. The adjudicative process would suggest that the workers' health might be endangered and therefore no compromise is possible. The third difficulty that is suggested is that this kind of abstract statement of principles and use of performance standards may entail certain diseconomies in administration. The small builder frequently wants to know the limits he can reach and still be within the law. These kinds of statements may leave him feeling uncertain and slightly confused. Similarly, the administrator would probably have to spend a prodigious amount of time on each development since such a wide variety of interpretation would be possible. These two problems would probably be far more serious in the early period of operation before people become as familiar with this kind of system as they are with the present one. In time one would develop an understanding and ease with this more abstract system that would be equivalent to that of the present system.
A final set of criteria must be satisfied. The proposed system of standards must comply with the requirements that each standard be:

1. positive
2. not arbitrary
3. reasonable when formulated
4. flexible
5. simple to understand.

This section will try to show how the laws, which are the operative standards in the proposed system, satisfy these conditions.

**Positivity:** It will be recalled that all the laws are formulated in terms of the positive goals to be achieved. Each strata of the law relates back to the positive goals of the strata above and finally to the constitution itself. Because of this method of formulation no prohibitions are established. It is hoped that thus many different approaches and solutions to the same requirement will result. As an example of this, it will be recalled that no land use is assumed to generate a specific degree of disturbance. It is hoped that improved methods of operation will in fact be able to alter the performance of different kinds of uses. Because of this underlying assumption no land areas are prohibited to specific uses. The developer must show evidence of the degree of disturbance that can be expected from the particular way he chooses to operate his use before an area number and letter are assigned to him.

**Not Arbitrariness:** The way in which the laws are formulated is such as to preclude arbitrary requirements both in terms of the substantive requirement and in terms of the law’s administration. It is to be assumed that whenever possible the law will be based on scientific research which has resulted in certain measurable criteria being established as the standard. As in the example above, it is hoped that research will indicate what level of illumination should be required in a room where specific kinds of tasks are to be performed. Further assurance against arbitrary
regulations or their administration is the citizen's right to appeal decisions. If it can be shown that the law perverts the real meaning of the constitution then one can be assured that the law will be altered. Makers of opinion and customary procedure will play but little part in either the writing or in the administration of the law.

MISSOURI INDIAN POLICY: One sometimes finds that never ways of achieving certain ends are not recognized in many specification codes. The result can be a more expensive or less satisfactory way of achieving a desired end. This is the sort of practice that would be characterized as unreasonable in terms of the best knowledge available. Similarly, the laws are phrased so that if one should choose not to solve the problem in the simplest and most up to date way one is not forced to do so as long as the goals established in the laws are satisfied. It is also assumed that the goals both in the constitution and the more specific ones that are in the laws are reasonable in the sense that they can be achieved in terms of the resources in the area. For this meaning to become clearer it would probably require a timetable during which period certain ends would be achieved. A citizen would therefore be able to challenge not only the goals themselves but the time period allocated for their achievement. On the level of the law where private development might also be controlled in time the citizen similarly has the right to challenge the official decisions.

FLEXIBLE: This requirement is really a part of the requirement discussed above. Flexibility in time would allow for changing circumstances to either delay or speed up the achievement of official goals. Similarly, flexibility must allow for newer methods of doing things to be used and this would also mean allowing the use of new materials and the use of old materials in unfamiliar ways. As was said above, by stating the goals rather than the method of achievement a certain measure of flexibility is built into the system.
SIMPLE TO UNDERSTAND: This does not mean that the laws are written so that any
ten year old child will be able to understand them. What this criterion is aimed
at is the necessity of having the laws written so that both a lawyer and a technical
expert are not needed for their interpretation. It is suggested that a great deal
of the legal jargon which encumbers present day laws is not really necessary. An
example was provided in comparing the definitions of the Harrison, Ballard and Allen
Zoning Ordinance for New York with the zoning ordinance for the City of Berkeley in
which the land use problem are a great deal simpler. Harrison, Ballard and Allen
used extremely simple language and frequently used simple diagrams to express an idea
which the smaller city had obscured in a mass of verbiage. The goals to be achieved
at each level of the law can be stated in very simple terms so that the ordinary
citizen should have no difficulty in understanding the spirit of what is required
of him and why the requirement should be necessary. If the use is one in which the
requirement is of particular complexity it will then be stated in terms which the
specialist can easily understand without the need of a lawyer to explain it to him.
In this sense then the spirit that informs the law is easily understood by the lay-
man and the reasoning behind the technical performance standards is equally simple
to understand, the laws will be clear and simple to understand.
REFERENCES


2. A discussion as to how these functions might specifically be allocated between the two tiers in London is to be found in William A. Robson, *The Government and Misgovernment of London* (2nd ed.; London; George Allen and Unwin Ltd., 1948). I do not see that the system he suggests is any more rational than the Toronto compromise.

3. The functions discussed were suggested by G. Montagu Harris, *Comparative Local Government* (London: Hutchinson's University Library, 1948).


7. *Ibid*.


14. Chester, *op. cit*.

15. Robson, *Great Cities Of The World*. 
CONCLUSION

It can be taken as self evident that mass unemployment is an evil, though a small degree of unemployment may in fact be necessary if labor is to be at all mobile. In a similar way this thesis has assumed as self evident that the total existing physical environment of our cities is unsatisfactory although it is admitted that a small part of it may indeed also have to be unsatisfactory at any one time if the environment is in a state of change.

The theoretical proposals put forward in this thesis are therefore intended to bring about some measure of improvement - however small - in the urban environment. They are intended to bring about such improvement through the use of three principles.

The first concerns itself with the definition of the community's objectives and of giving these some legal status. These legal aims are as it were the general performance standards against which the actions of the community's servants can be tested.

The second deals with the method which should guide the community's servants in the formulation of the legal codes affecting the physical environment. The method put forward is that in which codes should wherever possible state the objective without specifying the particular means by which it must be achieved. Only a given level of performance is to be mandatory within each code.

The third suggests the unification of all codes dealing with the regulation of the urban physical environment into a single document so that their proper relationship can be seen both at the time of writing and during their enforcement.
The actual effect of these measures cannot of course be forecast. Not least, because the introduction of these suggestions would in turn lead to other measures which have not even been considered. There would undoubtedly be a synergetic effect. Only a few expected results can thus be outlined.

The Master Plan of the City of Berkeley proposes a clustering of dense residential areas around the Central Business District, a subsidiary commercial centre, and the University, although only this latter clustering around the University is evident from the data of the 1950 Census. The assumption stated in the text is that these areas are to be inhabited by "students, down-town workers and commuters". The greatest amenity for high density development - in the particular sense that living amenity is generally considered within the region - could however be provided in the hill area which is also adjacent to a large regional park or close to the Bay. The former is designated the lowest density area of the city, the latter is an industrial zone. The implicit assumption is the desirability of being close to the place of work. Yet this is in direct opposition to the desired living pattern of Northern California where amenity is sought even at the expense of very extensive commuting. A choice between these different amenities was not presented as such to the citizens not least of course, because of the vested interest of the dominant power group of the city now living in the hill area. There is thus no performance standard against which to judge the proposed density distribution. The plan is merely a repetition of an old pattern. It would seem, therefore, that a method of establishing priorities and aims is needed so that a density pattern such as that of the Berkeley plan may be judged. Given a prior definition of aims it seems also much more probable that such a map would never have been devised.

The Zoning Ordinance of the City of Berkeley specifies a minimum width of 4 feet for side yards in certain residential areas. The aim of this specification is presumably to provide light, air, sun, privacy and fire protection. That
it does so inadequately on all counts need not be elaborated. In the Bay Area climate a more rational use of a small plot in an urban area might be to build an internal patio which would give at least equal if not greater amounts of light, air, and sun and certainly provide a great deal more privacy. A fire-proof party wall would also provide equal if not greater fire protection.

The specification code of the ordinance thus fails to achieve its implicit aims and hinders the use of an alternative building form. The use of performance codes stating only the measure of light, air, sun, privacy and fire protection required would make possible the building of not only the free standing house but also of that with an internal courtyard as well as many other forms not yet considered.

The Fire Code of the City of Berkeley specifies two means of egress for certain types of buildings. These buildings may occur in a commercial zone where there are no side yard requirements. At least one of these means of escape is thus likely to lead to the front yard. The Fire Code makes no provision regarding the front yard. The Zoning Ordinance does however permit 100% occupation of the front yard by parking. Assuming the rear escape blocked by flames and smoke, people moving down the front escape may find their way into the open blocked by a solid line of cars. The aim of an easy evacuation of the fire zone during panic conditions is thus hardly fulfilled. There is considerable conflict between the two codes because no clear aim is established which is to be followed by all the regulations governing the use of that plot. It would seem highly desirable, therefore, to have a unified code of related regulations. Each regulation could then be tested against the stated objectives.

The main hope of course is that all these measures will make possible the use of solutions within the urban environment which have not yet been tried and that each of these will preserve the concept of the general welfare. It is thought that through such experimentation, and perhaps only through such
experimentation, urban forms more satisfactory than those existing may be found. The present century has found new ways of making furniture, of building architecture, of organizing transportation, each of which is beginning to meet the specific needs of our period. It seems inconceivable therefore that there is no new way in the relationship of these things, no new urban form. An urban form is however the result of many related actions and in our society the relationship of actions is governed by law. The prerequisite of a new urban form is therefore a body of law which makes such forms possible. This it would seem is the first task.
APPENDIX A

THE RIGHT TO LIGHT

This appendix is intended to show in some detail the operation of a particular performance standard. The standard governing the right to light of adjacent users has been selected for illustration.

Three adjacent properties, A, B, C, are assumed. Property B is about to be developed and the rights of the owners of A and C are to be safeguarded. Each of these owners has equal right of light along the entire perimeter of his property. A floor area ration of 2 is also assumed as being in operation for this area.

Diagram 1

First a hypothetical building envelope is constructed over A and C which consists of 100% coverage at the given floor area ratio.

Diagram 2
Horizontal planes are then drawn within this envelope corresponding to the number of the floor area ratio. In this case the envelope is bisected.

Diagram 3

A continuous opening between horizontal planes is assumed. Then at a height of 3 feet above each horizontal plane including the ground floor and at a given distance from the edge of the envelope, say 25 feet, a specified amount of unobstructed sky vault, say 2%, has to be preserved. In other words, the new development on plot B may assume any height or form within the limitations of the floor area ratio provided it leaves at least 2% of the sky vault unobstructed when measured along this critical line 25 feet within the imaginary building envelope constructed on the adjacent property. Present or future users of plots A and C are thus ensured the right to a defined quantity of light. Although the amount of free sky vault is a poor measurement for the determination of the actual level of illumination within an enclosed space which depends a great deal on reflection, it is a fair measure of the amount of available daylight entering the space. The latter is the important criteria in this case.

The computation of the amount of sky vault left unobstructed is performed graphically by the use of protractors. A standard protractor has been evolved by the Building Research Station of the Department of Scientific and Industrial Research of the British Government and may be used without any special knowledge or previous training.

In practice the use of such a standard means that development is not
given a specific form by set back and angle of light restrictions but is free to assume a number of forms provided each does not infringe the rights of adjacent users.

For example, a long building may be erected on property B as outlined in Diagram 4.

Diagram 4

Lighting conditions will be critical at point Y on Property C. The building on B may however come quite close to the envelope of C as light will reach Y from the sky vault left unobstructed on either side of the narrow end of the building. If however the building is turned through right angles as in Diagram 6, then it would have to stand much further back from the edge of the envelope of C to leave the required amount of sky vault unobstructed.

Diagram 5

The actual figures quoted in this appendix such as the 2% unobstructed sky vault, the distance of 25 feet or the envelope based upon 100% coverage are given for purposes of illustration only. Specific data could only be determined if a number of models were constructed to test this hypothesis.

REFERENCE: