ZONING AND THE AMERICAN DREAM

Promises Still to Keep

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CHAPTER

7

Legislating Aesthetics: The Role of Zoning in Designing Cities

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THE CITY AS COMMONS

Freedom is the recognition of necessity. [HEGEL]

The biologist Garrett Hardin presents a convincing argument in treating the environment as a commons. In his paper "The Tragedy of the Commons" he describes the overexploitation of the commons, or in our case the city, by its citizens.

> Finally, however, comes the day of reckoning, that is, the day when the long-desired goal of social stability becomes a reality. At this point, the inherent logic of the commons remorselessly generates tragedy.
>
> As a rational being, each herdsman seeks to maximize his gain. Explicitly or implicitly, more or less consciously, he asks, "What is the utility *to me* of adding one more animal to my herd?" This utility has one negative and one positive component.
>
> 1. The positive component is a function of the increment of one animal. Since the herdsman receives all the proceeds from the sale of the additional animal, the positive utility is nearly +1.
>
> 2. The negative component is a function of the additional overgrazing created by one more animal. Since, however, the effects of overgrazing are shared by all herdsmen, the negative utility for any particular decision-making herdsman is only a fraction of −1.
>
> Adding together the component partial utilities, the rational herdsman concludes that the only sensible course for him to pursue is to add another animal to his herd. And another . . . . But this is the conclusion reached by each and every rational herdsman sharing a commons. Therein lies the tragedy. Each man is locked into a system that compels him to increase his herd without limit—in a world that is limited. Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons. Freedom in a commons brings ruin to all.[1]

The utilitarian calculus used by the herdsman requires him to downgrade the negative effects created by his activities because they are shared by all. The underlying assumption of this calculus is that the herdsman has unlimited rights to the commons. There is no mention of countervailing obligations that would avert the imminent tragedy of the com-

mons. The U.S. Constitution is notably reticent regarding the obligations inherent in the ownership of private property. With the exception of the police powers broadly defined in the Preamble, all other references to property refer to the rights of the owner. Government interference or regulation of the use of property, except in those special circumstances when the public health, safety, and welfare are adversely affected, was for all intents and purposes implicitly forbidden. The Common Law of Nuisance, the elusive power of social pressure, and the enlightened self-interest of the marketplace were deemed sufficient to guide the development of American cities. The late eighteenth century machinery of liberal economics in turn reduced the traditional ethical, political, and social values inherent in land ownership to that of an economic commodity as it did of all things, including human labor. The free use and manipulation of urban land was the signpost of an urbanizing America in the nineteenth and early twentieth centuries.

The concept of obligations to the community or commons in the case of our cities was relegated to the laissez-faire world of Adam Smith's "invisible hand" wherein the individual who "intends only his gain" is "led by an invisible hand to promote . . . the public interest."[2] In Smith's simpler world where a large productive unit might have had 15 persons, many of whom were family members, this might have been true. When Smith wrote, his world of small workshops was beginning to be displaced by the larger scale and anonymity of the factory system and the institution of the limited liability corporation. By the middle of the nineteenth century American cities were expanding rapidly, urbanizing rural land while simultaneously increasing the intensity of use of previously urbanized land.

By World War I, our older cities had annexed virtually all the land that defines their current boundaries. This accelerated growth took place without significant governmental intervention, the exception being the tenement laws enacted in the largest cities, occasional limited height districts, and building and fire codes. The design of the form of our cities was carried out primarily by lawyers and surveyors and municipal engineers who, in the process of laying out the gridded street systems, subdividing the blocks into lots and determining the size and location of infrastructure, probably had very little understanding or appreciation of the design implications of their decisions. Issues of land use, functional relationships, traffic and transportation, density, and building form and design were determined by the rationale of the free market.

In many ways the free market in development was reasonably rational. The economic activities of the city, commerce and manufacturing, for reasons of economic and functional efficiency, tended to locate in proximity to each other. The better sort of residential development tended, by economic power and social pressure, to be in exclusively domestic environments. Nonetheless, the nineteenth century city presented an image evoked in the literature of the period of chaos, congestion, and disease. Urban residential and commercial densities in New York City in the nineteenth century, for example, were among the highest in the history of urbanization. The skyscraper, the combined manifestation of a free market in land and a new building and transportation technology, got taller and taller in an effort to get its day in the sun. The skyscraper was developed in response to the functional demands of proximity, the maximization of profits, and the amortization of high land costs. The darkened and congested streets of our burgeoning central cities were the result of unregulated urban development.

Notwithstanding the free market, the City Beautiful movement, a derivative of French Beaux Arts planning, inspired large-scale urban design plans during its period. The most notable example was the Chicago Plan of 1909 by Daniel Burnham. The plan presented an image of a rebuilt Chicago along the lines of Baron Haussmann's Paris. While the municipality could, through eminent domain, condemn land for the envisioned boulevards and parks, it lacked the ability to impose its design controls on private property without the wholesale condemnation and purchase of private land and buildings. This traditional European autocratic approach was clearly anathema to the American zeitgeist of the times and probably beyond the budgetary capabilities of Chicago. Clearly the common law of nuisance was ineffective to deal with the new metropolitan reality because in most instances it was not anticipatory. Indeed, so was the ability of the free market to socialize development. The "invisible hand" had lost its punch. A broad application of the police power was invoked to deal with the emerging urban reality.

The Commons Zoned: The 1916 New York City Zoning Ordinance

The development and adoption of zoning was the single most potent legislative response to the lack of adequate controls on urban development in lieu of the drastic actions outlined above. On February 27, 1913, the Board of Estimate and Apportionment of the City of New York adopted a motion proposed by the president of the Borough of Manhattan to create the Heights of Buildings Commission, which developed the United States' first comprehensive zoning resolution. The motion read as follows:

> Whereas there is growing sentiment in the community to the effect that the time has come when effort should be made to regulate the height, size, and arrangement of buildings erected within the limits of the City of New York, in order to arrest the seriously increasing evil of shutting off light and air from other buildings and from public streets, to prevent unwholesome and dangerous congestion both in living conditions and in the street . . . .[3]

Testimony submitted to the commission by architects, landscape architects, businessmen, insurance companies, real estate companies, and good government groups were unanimous in their support of regulations that would direct the spatial organization of urban activities and the density and form of the buildings. Ernest Flagg, architect of the Naval Academy at Annapolis and the Singer Building and model tenements in New York City, spoke in favor of zoning as the representative of the New York Chapter of the American Institute of Architects.

> It seems to be generally conceded that something must be done to limit the height of buildings. We are learning by experience that streets designed for a city of four or five stories high cannot be made to serve properly for one, two, or three times that height.

He then proceeded to outline the advantages and disadvantages of high buildings, concluding

> . . . that a plan which will prevent overcrowding while still permitting the erecting of high buildings is the best one to adopt. If such a plan can be found, why is not the problem solved, for what more can be desired than to avoid the evils while retaining the benefits of high buildings.[4]

Similarly, businessman Simon Bretano speaking for the Fifth Avenue Association stated in

testimony before the Building Heights Commission:

> . . . that it is no longer a universal opinion that a building of unrestricted height is necessarily the final form of construction in the City of New York for the purpose of conveniencing the needs of modern life or business, or that its relations to the economy of the city is such as it was a short time ago believed to be by almost everyone.[5]

In 1916, the City of New York adopted the first comprehensive zoning ordinance in the United States. The ordinance regulated the density and location of urban activities as well as the form of the buildings. The device of choice was districting, a European planning concept that caught the imagination of the country's progressive-minded urban activists and professionals. Although employed in numerous American cities, districting never had been comprehensively applied to the entire area of a municipality before the 1916 ordinance. Districting, the rational distribution of land uses and density, organized the activities of the city into discrete areas reflecting the application of the factory mode of production wherein the production process was atomized into its component parts, rationalized, and reassembled into a more efficient process. Cities were similarly dissected into component parts and reorganized, to the degree possible, into a coherent and efficient whole.

Districting was anticipatory. Through both analysis and experience, future land use conflicts were identified and then resolved through the spatial segregation of apparently incompatible land uses. This was accomplished by the mapping of the Use Districts. The 1916 Ordinance lists nine Use Districts: a residence district, four retail districts, two business districts, one manufacturing district and an unrestricted district allowing all uses. Each Use District was an exclusivity with the residence districts limited solely to residential use. In addition, there were Height and Area Districts that regulated the form and density of new development within the Use Districts. Every piece of real property in the city was governed by this mapping triumvirate. Supplementing the maps was a text that outlined the police power purpose of the regulations, defined terms, and detailed the district regulations and administrative procedures. The regulations were administered as-of-right by the Department of Buildings, which reviewed all new buildings for compliance. The application of the New York law was widespread as it defined the structure and substance of subsequent zoning ordinances. Justice Sutherland, writing 10 years later for the majority in *Village of Euclid* v. *Ambler Really Co.*, acknowledged the origins of the village of Euclid's zoning ordinance by citing the substantive work done by the Building Heights Commission preceding the adoption of the 1916 New York Zoning Ordinance.

> Zoning has received much attention at the hands of commissions and experts, and the results of their investigations have been set forth in comprehensive reports.[6]

The majority opinion in *Euclid* recognized the impasse of the "tragedy of the commons" regarding unrestricted urban development. The unrestricted use of the commons would need to be restrained if the commons itself was not to be exploited to ruination and depletion. Writing for the majority Justice Sutherland stated that:

> Building zone laws are of modern origin. They began in this country about 25 years ago. Until recent years, urban life was comparatively simple; but with great increase and concentration

> of population problems, have developed, and constantly are developing, which require, and will continue to require, additional restrictions in respect of the use and occupation of private lands in urban communities. Regulations, the wisdom, necessity and validity of which as applied to existing conditions, are so apparent that they are now uniformly sustained, a century ago would have been rejected as arbitrary and repressive. Such regulations are sustained, under the complex conditions of our day, for reasons analogous to those which justify traffic regulations.[7]

In Sutherland's eyes, unrestrained urban development was destructive to the interests of all landowners. The overexploitation of the urban commons by individuals was producing problems that were to be absorbed by the community as a whole recreating, in more complex terms, Hardin's herdsman's dilemma. Zoning, particularly the concept of physically bounded districts, was deemed a viable solution to the potential "city as commons" tragedy. The simple fact of the recognition of the impending ruination of the urban commons was significant in the choice of zoning as the legislative technique of choice. The ability to, or at least the sense that one can anticipate land use problems and conflicts, is at the conceptual core of traditional zoning.

But what was lost in the trade for predictability and certainty? Obviously, the developer and architect now had a partner in the development and design process. Unlike the prezoning days of American urban development when the developer and architect virtually were free to determine the uses to be contained within the proposed building, the intensity of the use of land, and the form and details of the building, the development now was to be shaped by a public-private partnership. By instituting zoning, the municipality had acknowledged its interest in the development of privately held urban land. The types of uses to be housed and the density and the form of the building, but not its architectural details and style, were determined by the zoning ordinance as a function of a site's location and its size. The loss of a degree of freedom of choice was compensated for by the relative predictability of what could and might be built on adjoining sites thereby protecting the public and the investments of individual property owners. Furthermore, the attributes which made the city or commons desirable could not, with certainty, be appropriated by any individual developer. At its best, zoning fits the axiom that "the whole is more than the sum of the parts."

Despite its rigidities, Euclidean zoning has many virtues. Its structure and substantive regulations allow for development predictability, certainty, and administrative accountability and objectivity. Euclidean zoning is accountable because its rules are explicit and inflexible. The clarity and consistency of the rules allow for the objective review of each individual project as-of-right. The reviewer has virtually no discretion in administering a Euclidean ordinance. The development either complies or does not comply. Paradoxically, as we shall see, it is exactly this virtue that its critics point to as its conceptual flaw.

In a sense, zoning attempts to legislate the utilitarian dictum: "The greatest good for the greatest number." Notwithstanding the clarity of purpose of the dictum, the dictum is, as others have pointed out, mathematically impossible. One cannot maximize two variables in the same equation. (Note: maximization is not to be confused with optimization, which can be achieved through linear regression analysis, for example.) In one case, maximization of individual freedom of choice, as we have seen in Hardin's example, ultimately is contradicto-

ry to the promotion of the greatest good and similarly the promotion of the "good for the greatest number" may be at the expense of the individuals whose "good" is not served or at least compromised. Since the formula is a mathematical and practical impossibility, it behooves us to explore the location of the boundary line, fuzzy as it may be, between the public interest and private interest in the design of an urban building. This may be restated as the degree of intrusiveness of the public regulation of private property given First, Fifth, and Fourteenth Amendment protections.

This is even more true, given that zoning in New York City and elsewhere was not ostensibly aesthetically based. Architect Thomas Hastings of Carrère and Hastings, architects for New York's Grand Central Terminal, specifically dealt with the issue of an aesthetically driven zoning ordinance:

> Where I believe we American architects so often make a mistake is that we present our case as an appeal for aesthetic consideration and for the general appearance of the city. In my opinion, it is not a question of art, but of sanitation and of justice and of law . . .
>
> . . . I do not believe that the aesthetic argument will do any good. A city will look well if the conditions imposed upon architects are reasonable. I do not believe in the idea that for the sake of beauty we should look for any uniformity of belt courses or cornices on buildings.[8]

Hastings attempted to define the boundary between city design and building design. In zoning terms, this might be defined by the limits of the public interest in a private matter: the design of a building. For Hastings, the design of a building included determining its use, its form, and its articulation and individuation from adjacent structures within a broader institutional construct. With the exception of the form that would, in part, be determined by zoning, all other aspects of a building's design remained with the architect. This scheme apparently was not only acceptable but encouraged by Hastings. Flagg viewed zoning as the reasonable distribution of rights and obligations when building in central cities. Design freedom was apparently a nonissue to these master architects. In subsequent sections, we will examine traditional and nontraditional zoning techniques relative to the Hastings schema.

ZONING AND CITY DESIGN

> *There are intentional and unintentional towns. St. Petersburg is an intentional town.* [DOSTOEVSKI]

The European monumental tradition of city design makes no distinction between the architecture of buildings and city design. City design is architecture and vice versa. Although conceived to some degree with the rationalization of urban functions (e.g., Leonardo's multilevel street systems for ideal cities), the primary purpose of the European monumental tradition was to impose a sense of visual order on the city through the application of formal design conventions, many of which derived from Renaissance painting. The distinction between city and building design, so fundamental to our evaluation of the proper role of zoning in American city design, is of no relevance in a tradition that treats streets and cities as idealized architectural set pieces. The intentional city, in this context, often was approached as a huge idealized architectural project whose ultimate form was predetermined by a carefully elaborated set of plans, drawings, and specifications. The physical master plan is the contemporary manifestation of this tradition. In the American context, Jon-

athan Barnett has defined urban design as the art of designing cities without designing all the buildings.[9] First, Barnett suggests that the art of designing cities must include its most visible component—the city's constituent buildings—and second, that there are and should be methods to design cities without designing each building. His definition is consistent with American concepts of property and cultural pluralism and pragmatic in its understanding that no central authority is capable of designing all the city's buildings nor is that capability desirable. This view holds that city design is contingent or dependent on or conditioned by something else rather than idealized. For our purposes, the intentional city is the idealized city in which the building forms are predetermined while the unintentional city is the contingent city. While both represent concepts of city design, they are based on different premises.

Kevin Lynch describes the contingent nature of a city as a place:

> . . . which is perceived (and perhaps enjoyed) by millions of people of widely diverse class and character, but it is the product of many builders who are constantly modifying the structure for reasons of their own. While it may be stable in general outlines for some time, it is ever changing in detail. Only partial control can be exercised over its growth and form. There is no final result, only a continuous succession of phases. No wonder, then, that the art of shaping cities for sensuous enjoyment is an art quite separate from architecture or music or literature. It may learn a great deal from these other arts, but it cannot imitate them.[10]

This assertion that the art of designing cities is separate from architecture is a distinctly American observation based on American traditions and attitudes. If Barnett and Lynch are correct, then where does one draw the line between civic design and architecture in the context of zoning as a technique to guide the development of the form of the city?

Urban Building Blocks: Replicability and Redundancy

The physical building blocks of a city are the specific geography of the site, the street and open space system, the blocks and the lot divisions, and the building types which give three-dimensional form and meaning to these structures. Traditional zoning defines the form, density, and use of the thousands of anonymous buildings that make up a city and its districts. In that sense, zoning builds on the idea that cities are conventionalized environments that communicate to the city dweller through the repetition of design conventions on an urban scale. An urban convention may be the clear distinction between public and private space, as defined by building walls, the hierarchical street system of the Arab city, the stoop of the New York row house, or the free-standing, axially sited public building of the Baroque era.

Cities are models of perceptual redundancy, a time-honored method of importing information to the uninitiated. The redundancy includes the grid of blocks and streets and the redundancy of the form of the street space defining buildings. The building form that is repeated is the replicable model or type. It traditionally has resulted from social, economic, and aesthetic concerns and has evolved over time. The replicable model is the building block of the city. The Amsterdam canal house, the Georgian row house, the New York brownstone, the loft building, and the high-rise office building are examples of building types.

One should note that not all urban build-

ings possess the necessary virtues that allow them to become successful replicable urban models. Some buildings are one of a kind and are not replicable. The Seagram Building in New York City, the model for the 1961 Zoning Resolution, is one such building. Its apparent replicability is denied by the specificity of its site design. The masonry palazzo-style Racquet Club fronting the Seagram Building across Park Avenue and the prismatic bronze and glass Seagram Building with its flat granite plaza is an architectural set piece. The two buildings are mutual foils. Attempts to replicate the Seagram Building without the Racquet Club and the expanse of Park Avenue have proven disastrous.

Amsterdam also illustrates this point: Its replicable model, the canal house, is virtually the sole building type in the city with the exception of public institutions, warehouses, and churches. The form of the canal house is repeated ad infinitum, lining the concentric rings of the city's canals. Most people would agree that Amsterdam is a wonderful and liveable city although its individual buildings are not architectural set pieces. That is not to say that all the canal houses are either identical or undifferentiated. The differentiation or individuation results from the distinctive architectural treatment of each house. The roof line, window and door size and treatment, ornamentation, and the interior planning all are a function of the architect's ingenuity in working with the type: the canal house.

Similarly, New York's residential Park Avenue is a good contemporary illustration of the role of zoning. In this instance, the 1916 ordinance created the standardized building envelope in which the type, the apartment house, evolved and developed.

Some time ago, a student of mine[11] undertook an exercise formulated to isolate the urban design and architectural conventions of this highly imageable street. The student's method was simple. Montaging photographs of an entire section of Park Avenue, he selectively began to strip the buildings of their architectural features. First the varying building materials were neutralized, then architectural band coursing was removed, then detail articulations such as window moldings were removed, leaving only punched windows and entries. Finally the windows and entries were removed. What was left were boxes, all of approximately the same height on parcels representing multiples of the original parcelization of New York. The gross form of both the individual building and the street as a whole was the handiwork of the Height and Area Districts. These buildings are representative of both the pre-war apartment building type and the urban convention of street-defining building walls. Without designing each building, the street itself was designed.

Park Avenue exhibits the power of zoning as an instrument of city design. The role of the architect was twofold: the evolutionary development of the type (in this case the apartment house) in response to the market, social conventions, and building technology, and the individuation of the building through the manipulation of architectural conventions and details. Simultaneously, Park Avenue is both a unified place and a collection of distinctive buildings designed in a variety of styles. The Park Avenue apartment building was not legislated by zoning, rather the 1916 Zoning Ordinance provided the context—in this case a residential use district and a loose-fitting envelope in which the type was relatively free to develop in response to architectural and marketing requirements. Park Avenue illustrates the idea of civic design legislation that is contingent in the meaning of the word mentioned earlier. The ordinance did not legislate the building type but rather designed the pub-

lic space of the street—the unintentional by-product of the Height and Area Districts.

EUCLIDEAN ZONING: STRUCTURE AND SUBSTANCE

I meant what I said
And I said what I meant
an elephant's faithful 100 percent.
(DR. SEUSS, *HORTON HEARS A WHO*)

Euclidean zoning is a term of art, which includes all traditional zoning ordinances that are based on the New York districting plan of 1916. The Euclid, Ohio, zoning ordinance was its progeny—in structure. The content or the substantive regulations concerning the types of districts, and their attendant regulations for Euclid, Ohio, were, as logic would dictate, attuned to the village of Euclid and were not a literal translation of New York's substantive regulations. In zoning terms, the structure rather than the substance was replicated.

Virtually all Euclidean ordinances adopted New York's system of mapped Use, Height, and Area Districts and supporting text which described the uses allowed in each district, the height and building bulk or form controls, and the area regulations regarding yards and courts. The number of Use Districts, and the number, type, and degree of Height and Area Districts and controls, of course, varied from municipality to municipality.

The structure of Euclidean zoning is prescriptive and as-of-right. Prescriptive zoning has its equivalent in Mosaic Law in the sense that it is based on absolute prohibitions unequivocally written as "Thou shalt not . . . ." Certain uses are prohibited from specified districts, building street walls cannot exceed a certain maximum height, towers may not exceed a fixed percentage of the lot area, and so forth. The prohibitions are applied uniformly in all similar situations without exception. The prescriptive structure of Euclidean zoning requires, by definition, that all potential conflicts regarding use, building form, and density be resolved internally in the ordinance itself. A districting system, for example, resolves potential land use conflicts by excluding one or the other conflicting land use. In terms of building form, the usual trade-offs and accommodations that are typical of an architectural design process are similarly resolved in the ordinance rather than on the architect's drawing table, thereby limiting and in many cases strictly delimiting the architect's choices. The degree to which the design conflicts or choices are internally resolved as well as the reasonableness of the regulations are issues of substance to which we will return later. In essence, Euclidean zoning anticipates conflicts or choices, identifies them in the abstract, reduces them to a limited number of generic cases, and then proceeds to resolve them in the body of the ordinance. The combination of the prescriptive text and maps ensures predictability and certainty.

Use Districting

The system of Use Districts is the structural core of Euclidean zoning. Use Districts are exclusive rather than inclusive. They are organized from the most exclusive to the most inclusive. In Euclidean zoning, the area of single-family detached houses is designed to be the most restrictive and hence most exclusive zone. This undoubtedly reflects the importance placed on the domestic environment by nineteenth century reformers. Frederick Law Olmsted, arguing for planned domestic suburbs, emphasized that:

> It would appear, then, that the demands of suburban life, with reference to civilized refinement, are not to be a retrogression from, but an advance upon, those which are characteristic of town life, and that no great town can long exist without great suburbs. It would also appear that whatever element of convenient

> residence is demanded in a town will soon be demanded in a suburb, so far as is possible for it to be associated with the conditions which are the peculiar advantage of the country, such as purity of air, umbrageousness, facilities for quiet out-of-door recreation and distance from the jar, noise, confusion, and bustle of commercial thoroughfares.[12]

In similar language, Justice Sutherland rationalized the virtues of Euclid's Use Districting, prohibiting apartment houses in Residence Districts:

> With particular reference to apartment houses, it is pointed out that the development of detached house sections is greatly retarded by the coming of apartment houses, which has sometimes resulted in destroying the entire section for private house purposes; that in such sections very often the apartment house is a mere parasite, constructed in order to take advantage of the open spaces and attractive surroundings created by the residential character of the district. Moreover, the coming of one apartment house is followed by others, interfering by their height and bulk with the free circulation of air and monopolizing the rays of the sun which otherwise would fall upon the smaller homes, and bringing, as their necessary accompaniments, the disturbing noises incident to increased traffic and business, and the occupation, by means of moving and parked automobiles, of larger portions of the streets, thus detracting from their safety and depriving children of the privilege of quiet and open spaces for play, enjoyed by those in more favored localities—until, finally, the residential character of the neighborhood and its desirability as a place of detached residences are utterly destroyed.[13]

The advent of the bourgeois nuclear family, for whom the home was seen as a refuge against the vagaries and brutality of the capitalist city,[14] clearly influenced the exclusivity of the residential district. In an urban environment where very little was predictable except change, the urban residential district offered by comparison a controlled and predictable environment. Furthermore, the traditional European concept of urban space as a public living room of sorts ran counter to the prevailing post-Civil War thought. Urban public space became a threatening spectacle of lower-class behavior. The positive values generally associated with the street and square and public life took on negative associations. Uses formerly associated with public space became internalized in the house. This was a grand departure from the historical city where, with the exception of nuisances per se which by definition were prohibited from locating in a populated quarter, land uses were stratified vertically rather than horizontally.

The districting concept, when effective, reorders the idea of the traditional European city by surgically separating urban activities that once had coexisted in the same space. In older cities such as New York, the traditional European pattern of mixed uses was already out of favor by the end of the nineteenth century. The pattern of segregated land uses already was advanced with the market playing a significant role in rationalizing the use of urban land. Manhattan's Upper West Side in 1913 already was a restricted residential neighborhood of brownstones and avenue-fronting apartment houses.[15] Retail shopping was restricted to the interior north–south avenues (Broadway, Amsterdam, and Columbus avenues) while the perimeter streets, Riverside Drive and Central Park West and West End Avenue were exclusively residential.

The 1913 commissioner's report acknowledged this market-driven ad hoc districting:

> Every city becomes divided into more or less clearly defined districts of different occupation, use, and type of building construction. We have the central office and financial district, loft districts, apartment house and hotel districts, tenement house districts, private dwelling districts. The character of building appropriate for each district is of course dependent on the character of occupation and use in that particular district. A comparatively high degree of concentration is believed to be important for the facilitation of business in the office and financial district. Certain trades and industries require structures of unusual size or shape. The demand for housing varies with the differing taste and necessities of the inhabitants of the city. There is a demand for hotels and apartment houses as well as for single-family dwellings. Moreover, advantage of location and the resulting enormous difference in land values tend strongly toward differentiation in the character and intensity of use and this and other social and economic factors tend toward a natural segregation of buildings according to type and use. The city *is* divided into building districts. We believe that these natural districts must be recognized in any complete and generally effective system of building restriction.[16]

In the case of the Upper West Side, Use Districting legitimized practice.

By the time of the First World War, mass transit and suburban railroads, escalating automobile ownership, the scale of American businesses, advances in communications, and a host of other innovations made districting possible. Cities were less spatially bounded than they ever were because of the apparent conquest of time by technology. Furthermore, organizational specialization, be it industrial or commercial, legitimized the development of discrete districts in which the backward and forward production and organizational linkages of the district's activities were rationalized.

Zoning use districting probably has been given too much credit in determining the initial form of our suburbs and cities. The process already was well underway after the Civil War in both the suburbs and the central cities. Sutherland's judicial support of the sanctity of the single-family house—the residence district from the "coming of the apartment house"—reasonably can be interpreted as the legitimization of his own values and his attitudes toward the working classes, the people who lived in rented apartments. At best, districting legitimized the then-prevailing attitudes of the affluent classes that were manifested by the market and planning ideology. Judge Westenhaver best summed up these attitudes in his lower court decision:

> [The object of the ordinance was] to place all the property in an undeveloped area of 16 square miles in a straitjacket. The purpose to be accomplished is really to regulate the mode of living of persons who may hereafter inhabit it. In the last analysis, the result to be accomplished is to classify the population and segregate them according to their income or situation in life. The true reason why some persons live in a mansion and others in a shack, why some live in a single-family dwelling and others in a double-family dwelling, why some live in a two-family dwelling and others in an apartment, or why some live in a well-kept apartment and others in a tenement, is primarily economic. It is a matter of income and wealth, plus the labor and difficulty of procuring adequate domestic service. Aside from contributing to these results and furthering such class tendencies, the ordinance also has an aesthetic purpose; that is to say, to make this village develop into a city along lines now

> conceived by the village council to be attractive and beautiful.[17]

Use Districting is fundamental in determining the character of urban areas. It is the activity that determines the character of an urban area rather than the buildings. Buildings often outlive their initial purpose and are adapted to new activities which redefine the character of the district. Soho in New York City or Lowertown in St. Paul, where turn-of-the-century manufacturing buildings have been converted into apartments and fashionable shops, are recent examples of this phenomenon. When referring to sections of the city, urban dwellers invariably will refer to the activity when describing an area rather than the buildings, e.g., the Flower District, Garment District, Theater District. The Use Districts essentially canonized the prevailing activities and undoubtedly served to protect them against the infiltration of new displacing activities. This is not necessarily undesired as experience has shown that the competition for urban space, if solely determined by sheer economic muscle, creates problems and conflicts, the burden of which the public ultimately must bear.

The content or substance of the Euclidean ordinance similarly varied from locale to locale and was based on existing conditions. This fact was recognized by Sutherland who wrote in regard to the appropriateness of each zoning ordinance of its locale:

> The ordinance now under review, and all similar laws and regulations, must find their justification in some aspect of the police power, asserted for the public welfare. The line which in this field separates the legitimate from the illegitimate assumption of power is not capable of precise delimitation. It varies with circumstances and conditions. A regulatory zoning ordinance, which would be clearly valid as applied to the great cities, might be clearly invalid as applied to rural communities.[18]

For that reason, the substance of a Euclidean ordinance is not easily replicable, it is city specific. The New York ordinance is a case in point from which one may generalize as it became the model for zoning ordinances of its generation.

The 1916 Height and Area Districts

The content of the New York City 1916 Zoning Ordinance was absolute and abstract. In addition to the spatial distribution of land uses, density was controlled by the Height and Area Districts. Each lot in the city had a maximum density that could be realized if the zoning envelope entirely was filled out. The envelope was defined by a maximum street wall height, based on a multiple of the width of the fronting street and a sky exposure or angle of light plane defined by a line drawn from the center of the street and intersecting the maximum allowable street wall height. This inclined plane intersected the Area District requirements for yards completing the envelope. Towers of 25 percent lot coverage or less were allowed to penetrate the sky exposure plane. The system of maximum street wall heights was proportional rather than numerical, honoring a traditional method of regulating building heights. It also was consistent with traditional architectural proportional building design systems. The zoning envelope defined the limits of the public's interest in the design of a building on private property. The building might take any configuration within the boundaries of the envelope which safeguarded the light and air to the street and adjoining properties. The 1916 Zoning Ordinance was contingent; it did not legislate a building type but rather defined the acceptable use or activity and a spatial envelope

leaving the market place and the architects' ingenuity to develop the building type.

In terms of the commons analogy, zoning's sky exposure planes limited the exploitation of the urban commons by the new building. The Height of Buildings Commission's assumption was one of equity:

> The restrictions recommended are designed to secure as much light and air, relief from congestion and safety from fire as is practicable under existing conditions as to improvements and land values. In place of proving a menace to existing values, they will tend to prevent future serious injury to such values.[19]

The Height and Area District regulations were inflexible regardless of the size of the lot, its orientation, and in most cases, the surrounding built context and topography. The Ordinance was absolute in the sense that the dimensions such as those for yards and proportions for street walls and sky exposure planes were invariable. It was also abstract in that it took little account of localized conditions with the exception of site size. Design flexibility increased as the site size increased. It was consistent with Euclidean zoning's concern for resolving boundary conflicts—those conflicts that occur at the property lines between public and private realms. The larger sites allowed for greater design choice.

This fact reflects the other contingent aspect of the 1916 ordinance (the other being its nontypological zoning envelope) and is realized by the greater variety of building forms on large sites in New York. The Empire State Building, Rockefeller Center, and the blockfront twin tower apartment buildings fronting Central Park are but a sample of the numerous distinguished buildings and the variety of building types that were developed during the almost 50 years that the 1916 Zoning Ordinance was in force, giving testimony to the "reasonableness" of the ordinance.

Notwithstanding the broad powers to form development (Height and Area Districts), Euclidean zoning did not attempt to change fundamentally the lot-by-lot development of America's older cities but rather attempted to harness it as did the earlier New York City Tenement Acts that created unified rear yards by requiring identical yards for each development. Large-scale assemblage of land for a single development was rare in developed cities. Rockefeller Center was an exception to the rule. The European urban design legacy which treated entire streets as architectural objects was anathema to the turn-of-the-century American development practice. Thus, Burnham's attempt to transform Chicago into the Paris of the prairie failed because it ran counter to the traditions of American urban development and private property. The individual lot was and still is the traditional focus of American urban development. Therein lies the dilemma. Can the thousands of landholding individuals making development decisions in their own economic self-interest, according to their own aesthetic preferences, be collectively harnessed to create, over time, an imageable and coherent block, street, district, and city without sacrificing constitutional values?

It was in this arena that Euclidean zoning had its greatest impact on the form of our cities. The Height and Area Districts determined the form of the city. These regulations not only determined the density of the proposed buildings but also influenced the form or volumetric configuration of buildings particularly when the development potential was fully utilized. New York's Euclidean Height and Area Districts, imperfect and unintentional as they were, demonstrated the urban design potential of zoning. Over time, buildings constructed on individual lots in conformance with the

Height and Area District regulations ultimately filled out entire streets and avenues.

While the buildings constructed under the 1916 ordinance might have been departures from earlier urban buildings, the aggregate ensemble of these buildings nonetheless adhered to traditional urban values that were both implicit and unintentional in the ordinance. The buildings continued the time-honored practice of street walls built at the street line, defining the public space of the street. Furthermore, the street walls were continuous, creating continuous building walls composed of multiple buildings. The Park Avenue diagrams discussed earlier illustrate this phenomenon. The combined effect of the sky exposure planes and the tower regulations, in typical development situations, required high coverage buildings if the maximum development potential was to be attained on a site that generally meant building to the street line. The effect of the 1916 Ordinance was to subordinate each building to that of the ensemble of buildings lining and defining the public space of the street—the streetscape.

Central Park West, Riverside Drive, and Fifth Avenue in Manhattan and the Grand Concourse in the Bronx, to name but a few, all are visually coherent or imageable streets that owe their form to the 1916 Ordinance. The buildings that line these streets are designed in a variety of architectural styles. They maintain fairly consistent street walls in both location and height with the upper portions of the larger developments set back in conformance with the sky exposure planes and tower regulations. The vividness of these streets rivals in its own way the best European examples of autocratic large-scale development and unified architectural design without designing, in a traditional sense, the architecture of the buildings in the context of a predetermined master plan.

The 1961 New York City Zoning Resolution

In 1961, New York City adopted a new zoning ordinance which was based on the Euclidean structure but not the substance of the 1916 Zoning Ordinance.

The 1961 Zoning Resolution had its origins in the utopian visions of the Modern Movement which were codified in CIAM's (Congres Internationale D'Architecture Moderne) Athens Charter and the more pragmatic *Plan for Rezoning the City of New York.*[20] The Modern Movement's vision of the twentieth century city, although all too easy to dismiss today, nevertheless had its virtues. As with most nineteenth and twentieth century urban reform, it was a reaction to the chaotic, speculative, unplanned, unhealthy, dark, squalid, and sordid cities of the nineteenth century. Modernism's critical analysis of the capitalist city led to the utopian approach that treated the existing city as a tabula rasa. The resulting discontinuities between new and old were seen as a minor inconvenience that was to be tolerated until the vision was realized. The 1920s European utopian imagery of a rationalized city structure of discrete land uses, located in super blocks and defined by a coherent street system containing freestanding prismatic towers, glittering in parks filled with the healthful benefits of air and sunlight and vegetation, was the intellectual and formal antecedent of the 1961 Zoning Resolution.

The physical form of the city was to be turned inside out. The nineteenth century capitalist city, continuing the pattern of earlier urban development, was composed of buildings fairly consistent in height and, most importantly, interconnected street walls that defined the public space of the street, while the modernist approach reinterpreted the building as an object sitting in space. The 1950 *Plan for Rezoning the City of New York* blandly de-

scribed this dramatic reversal of urban form in the section dealing with "angle of light obstruction" regulations. It was argued that the regulations would free the architect to design better buildings instead of "merely filling the (zoning) envelope," and "that the architectural ingenuity encouraged by the new regulations are believed to be more than adequate recompense for any loss of cornice uniformity (in either height or location)." All of this was justified by the new regulations producing:

> First (buildings) that are more economic to build. Second it will be possible to get light and ventilation into side windows. Third, in blocks developed under these regulations, more sunlight will come into the street over the lower portions of buildings.[21]

Nowhere is urban aesthetics or good city form mentioned. Although completed three years before the adoption of the 1961 Zoning Resolution, the Seagram Building, by Ludwig Mies van der Rohe, played a significant role in giving tangible expression to the new urban form. This pristine and elegant bronze-clad building, although built in conformance with the 1916 Zoning Ordinance (its tower covers only 25 percent of the lot area rather than the 40 percent coverage allowed by the 1961 Zoning Resolution) was suggesting the future by example in its provision of a publicly accessible open space—a plaza. The success of this design was compelling, and reinforced the architectural community's belief in the Modern Movement with its formal design theories, if not its underlying social program. Furthermore, it appeared that this distinctive building and its plaza constituted a replicable model. The Height and Setback regulations of the 1961 Zoning Resolution, in effect, legislated this building type. The approach was typological and was fraught, as we shall see, with all the problems inherent in legislating a building type.

The as-of-right sections of the 1961 Zoning Resolution were administered by the New York City Department of Buildings. The statutory basis for the as-of-right review was a series of regulations that prescribed the density, use, site planning, and form of the building. An incentive, new to New York's zoning, was built into the system. In residential districts higher density was awarded those developments that minimized lot coverage by constructing low coverage towers.[22] In the highest density residential districts and the central business districts a bonus of additional density and/or floor area was awarded the development for providing a publicly accessible, on-site open space—a plaza and/or arcade.[23] All of this was to be done as-of-right and was nonnegotiable, done in conformance with the absolute dimensional standards prescribed in the regulations.

Floor area ratio (FAR) was introduced to control density in commercial buildings and building volume in both residential and commercial buildings and therefore capped densities for any given site and the city as well. Each square foot of land in New York City was given a maximum development potential that could only be exceeded by the provision of a plaza and or arcade and which, if fully complied with, increased the basic maximum FAR by 20 percent.

This was a dramatic change from the 1916 Zoning Ordinance which controlled density and floor area indirectly through the combination of lot size, Height and Area Districts, tower coverage, building technology, and the marketplace. The result of the indirect control of density in Midtown, for example, was higher densities on large sites—the Empire State Building, occupying most of a full city block, has an FAR of 30.1—and lower densi-

ties (10–12 FAR) on smaller sites where the combination of street wall height, setback, and tower requirements practically precluded large, dense structures. The resulting population density was far less in practice than it would have been in theory due to the variable lot sizes and the difficulties inherent in assembling larger sites. (Theoretically 55 to 77 million inhabitants could have fit within the 1916 zoning envelope, assuming full build out, which in practice was impossible.)[24]

The flaw in the 1961 Zoning Resolution was not the as-of-right prescriptive nature of the ordinance (which worked all too well in achieving its implicit urban vision) or the piecemeal nature of its control over development—that is development parcel by development parcel.[25] The former was the traditional format of zoning while the latter the traditional form of property regulations (with the exception of urban renewal).

The flaw in the regulations was that they tended to produce virtually the same building and bonused plaza and/or arcade (arcades rarely were built because the bonus was undervalued compared to the plaza bonus—3 to 1 versus 6 to 1—and costlier to achieve) on every site. The result in this case *did* match the intentions, but the urban critics didn't like what the buildings looked like—they were banal architecture. Similar to the Park Avenue apartment houses discussed earlier, the new buildings were decorated versions of the legislated model or type. The zoning envelope and the building tended to be isomorphic, regardless of context and orientation.

It is telling that the critics focused on the banality of the Modernist building designs and the prescriptive as-of-right regulations rather than the fundamental question regarding the appropriateness of either the vision of an ideal city of freestanding towers or the typological approach to urban zoning which in practice produced an urban landscape of grinding uniformity.[26] The inherent rigidities of as-of-right prescriptive zoning were common to both the 1916 and 1961 regulations. While the structural flaw of prescriptive zoning was common to both, it was the substance and content of the 1961 regulations that were the issue. Whereas the 1916 zoning envelope was loose, spatial, and nontypological (its concern being the quality of the street space), the 1961 zoning envelope was tight and typological. It literally attempted to legislate not only a single building type to the exclusion of all others but, more grandiosely, attempted to legislate the physical master plan of the ideal city of the future. The ordinance treated the entire city, in European fashion, as an architectural design defying Kevin Lynch's observation that the art of city design is different from the art of architecture.

The structure of Euclidean zoning is essentially neutral concerning building and city form (one could contemplate mixed-use Use Districts). It is given form by the substance of the regulations. The critics' arguments missed the mark; the issue was not the quality of individuation of an architectural form, which was more an issue of prevailing architectural taste, building economics, and marketing, but rather the implicit values and inflexibility of the 1961 regulations. The vision itself was wrong and ultimately antithetical to New Yorkers' sense of urbanity. What is most revealing is that the substantive regulations under the two ordinances regarding height and setback that grew out of the desire to ensure adequate light and air to streets and buildings could produce such divergent urban and building forms.

The freestanding towers of Sixth Avenue are approximately the same density (FAR of 18) and provide the same amount of daylight as the earlier setback "wedding cake" and tower and base buildings that line Madison

and Park avenues. Clearly, building and city form are value sensitive. Ultimately, the abstractions of light and air, minimizing congestion, and so forth, must be translated into substantive regulations that cannot but reflect the cultural values and aesthetic preferences of the times, all other things being equal.

SETTING THE STANDARD

> *What a human being can adjust to no one should have to live through.* [GUSSIE SINGER]

Euclidean zoning always has been presented as having two significant virtues:

- Design neutrality, and
- Standards and criteria empirically and objectively based.

The issue of design neutrality has been dispelled in the preceding discussion. All zoning standards ultimately have aesthetic implications whether intentional or unintentional. The variable is the degree and type of specificity of the regulations.

The standards question should be looked at in terms of the substantive basis, if any, for the standard and the ease of administration of the standard.

As has been demonstrated, the simplicity and relative lack of ambiguity of Euclidean zoning allowed an architect and client to determine easily the zoning parameters for a particular site. The resulting scheme could, with the same ease, objectively be reviewed by a buildings department plan examiner for conformance to the regulations. There was almost no exercise of discretionary judgment in reviewing the scheme. The review was ministerial, based on absolute if not abstract standards. If there is a virtue in prescriptive as-of-right zoning, it lies in the consistency of its application and its strict adherence to the equal protection and procedural due process values of the Constitution.

Standards: The Use District

This leaves us with the substantive due process question, or how the standards are determined and whether they do, in fact, protect the public health, safety and welfare. Let us begin by examining the use districting of Euclidean zoning, first in terms of the exclusion of nonresidential uses from residential districts and, second, the exclusion of apartment houses from some residential districts. Later we will return to the origin and bases of the light and air standards. Justice Sutherland clearly outlines the rationale for the first case:

> The decisions . . . agree that the exclusion of buildings devoted to business, trade, etc. from residential districts, bears a rational relation to the health and security from injury of children and others by separating dwelling houses from territory devoted to trade and industry; suppression and prevention of disorder [later on referred to as nervous disorders—author's note]; facilitating the extinguishment of fires, and the enforcement of street traffic regulations and other general welfare ordinances; aiding the health and safety of the community by excluding from residential areas the confusion and danger of fire, contagion, and disorder, which in greater or less degree attach to the location of stores, shops and factories. Another ground is that the construction and repair of streets may be rendered easier and less expensive by confining the greater part of the heavy traffic to the streets where business is carried on.[27]

With the exception of noxious and harmful industrial land uses such as tanneries, stockyards, refineries, and the like that traditionally have been excluded from residential areas under the common law of nuisance per se, the exclusion of other land use activities such as

business, trade, and so forth from residential areas certainly is arguable.

The exclusion of industrial land uses from residential districts easily is supportable on the basis of actual objective documentation and experience with industrial activities. As with all land uses that have negative impacts, anticipatory land use legislation can take two approaches vis-à-vis locational standards; the noxious uses can be segregated physically or they can be required to internalize their negative aspects by adhering to specified performance standards. Euclidean zoning adopted the former approach probably because of the availability of space, the accessibility offered by mass transit and the automobile, and the relative simplicity of its administration.

The districts legislate homogeneity in residential areas to the exclusion of business, commerce, and trade. Residential districting can be ascribed to a consensual and acculturated sense of urban order and the value placed on the home environment by American bourgeois society discussed earlier. The exclusion being discussed here is absolute while the harm created by the inclusion of business and trade in residential districts is one of degree. Euclidean use districts are absolute in their exclusion and are not sensitive to issues of degree.

The potential harm described by Sutherland is supported neither by experience nor empirical data. At best, residential districting represents the social preferences of the lay public and professionals. Virtually every Old World city mixed business, trade, and residential living quarters. As tourists, we flock to these cities to vicariously experience their urbanity and civility.

Greenwich Village in New York City still functions as a traditional mixed-use neighborhood. Many commentators have held it up as the quintessential urban neighborhood[28] that might serve as a model for the development of other urban neighborhoods. Greenwich Village exhibits all the charms and character of a traditional European quarter, a character that the current diverse population finds attractive. For many it is a highly desirable place to live, work, and raise children.

One can only surmise that the traditional mixed-use neighborhood and homogeneous Euclidean residential district represent different values and preferences. In each case, the individual calculus used to assess the advantages of the environment is based on the values used in the calculus. The public life of the streets in Greenwich Village easily could be seen as good by some and bad by others. Similarly, the easy access to virtually all the daily necessities of life is evaluated against the quiet of strictly residential enclaves. In either case, the discussion of single-use or multiple-use districts is not an aesthetic issue in the sense of museum aesthetics but rather of consensual cultural values regarding urban order.

Problems associated with the gross grain of the Use District net were dismissed by Justice Sutherland, who wrote:

> The inclusion of a reasonable margin to insure effective enforcement will not put upon a law otherwise valid, the stamp of invalidity. Such laws may also find their justification in the fact that in some fields, the bad fades into the good by such insensible degrees that the two are not really capable of being readily distinguished and separated in terms of legislation. In the light of these considerations we are not prepared to say that the end in view was not sufficient to justify the general rule of ordinances although some industries of an innocent character might fall within the proscribed class.[29]

Obviously, what is one person's order or good is another person's disorder or bad. By

analogy, imagine a desk overflowing with books, papers, and other paraphernalia. The desk user sees order on the desk while the outsider sees chaos. Furthermore, as noted earlier, the 1916 Building Heights Commission freely acknowledged that the Use District adhered to development patterns already in place, replacing "planning objectivity" with the standards of the marketplace and the social and economic values they represented.

The issue of empirically derived standards for use districting is carried from the sublime to the ridiculous in Sutherland's support of the exclusion of apartment houses from residence districts.[30]

Putting aside the presumed validity of class segregation and the role of home ownership in determining economic status and social stability, there remains a double standard at work. Children in detached-house residential districts are to be accorded the full force of the law to create an environment perceived to be beneficial and salutary for child development. The same protection is not afforded children in apartment houses. In fact, one wonders, given the omission, whether Justice Sutherland knew children were raised in apartment houses.

Giving the good Justice the benefit of the doubt, he may have been generalizing from his own limited experience with tenements and their occupants. It also was not unusual for individuals to subscribe to a Spencerian form of environmental determinism. Reformers from the early days of housing reform through the heyday of urban renewal believed the tenement buildings themselves, the high densities, and sunless apartments bred the social and physical pathologies associated with slum dwellers.[31] For example, the high incidence of tuberculosis, long associated with the tenement apartment house by inferential evidence, has been shown to have been caused by the type of work being done at home (Bohemian cigar makers had a particularly high incidence of tuberculosis, we now know, primarily as a result of diet, sanitary habits, and the ingestion and inhaling of tobacco dust). The lack of sunlight to the workers was not confined to the tenement sweatshop but also was experienced by factory workers in loft buildings and office workers in buildings located in the darkened commercial canyons of the older central cities suggesting a causal relationship between the workers' incidence of illness and the lack of sunlight.[32]

One can only assume, as had Judge Westenhaver, that use districting in the clear absence of objective empirically derived planning and public health criteria was a proxy for the social values of those with the political muscle to legislate their sense of urban order.[33] Use districting under most circumstances represents a socially rather than an objectively determined use of urban space. In city design terms, it is an open choice, as both Greenwich Village and the exclusive residence district have proved to be workable models for city design either singly or in combination. Use districting is a design decision of the highest order as it is the structure that supports and is supported by the buildings.

As with the Use Districts, the Height and Area District regulations also were administratively objective. Either the proposed building conformed to the zoning envelope or it didn't. As with the Use Districts discussed above, control of density and the form of the building were in most instances practically and culturally determined. The light and air provisions of New York's two zoning ordinances illustrate this point.

Light and Air

The sky exposure planes of the 1916 and 1961 New York zoning regulations are practically

and culturally based. They do not reflect in any way minimal but rather socially and politically acceptable daylighting standards for New York's streets and buildings. The Building Heights Commission acknowledged the practical origins of the daylighting standards represented by the Height and Area Districts:

> In recommending restrictions we have necessarily been limited by existing conditions as to improvements and land values in the office and financial district. Were it not for the existence of many tall buildings, other and more nearly ideal restrictions could be imposed. The restrictions recommended are designed to secure as much light and air, relief from congestion and safety from fire as is practicable under existing conditions as to improvements and land values. In place of proving a menace to existing values they will tend to prevent future serious injury to such values.[34]

Retained to design the new daylight regulations for Midtown, the consultants (Kwartler/Jones) examined the daylighting and planning literature for empirically derived daylighting standards. Much of the literature came out of the public health movement and its research into the beneficial aspects of daylighting. Upon reflection, the consultants found much of the research scientifically naive and causal at best and political advocacy at worst. Conversations with staff at the Atlanta Center for Disease Control, the successor to the public health movement, regarding minimum daylighting level to maintain physiological well being, suggested daylighting levels slightly above that of a medieval dungeon.

Euclidean zoning posits minimum standards to protect the public health, safety, and welfare. In regard to daylight, even the worst canyons of Manhattan registered significantly above the physiological minimum. Daylighting standards are clearly a function of habituation, acculturation, and the hard practicalities of development economics, building marketability, and the layout of the city's streets and blocks. The absoluteness of the ratios and the pseudo-science of the sky exposure planes reveal a fatal flaw.

Can one, with any conviction and certainty, suggest that a 30-foot rear yard is so much better for us than one 29 feet deep, or that the sky exposure plane of 45 degrees is sufficiently better for our well-being than one of 46 degrees? Of course not!

The consultants' analysis of the 1916 and 1961 daylighting standards indicated elasticity in the daylighting performance of building in Midtown. Using the Waldram Diagram, an internationally accepted graphic indicator of daylighting performance, the consultants evaluated representative building "types" for their daylighting performance. Analysis revealed that daylight performance under both sets of prescriptive regulations (1916 and 1961) was fairly consistent but that the performance of the building "types" was elastic. Seventy degrees (the angle formed by a line drawn from the centerline of the street to the top of the street wall) was the typical height of street walls in Midtown Manhattan. The consultants found that the daylight performance of building "types" might be as high as 80 percent and as low as 66 percent of the skydome above 70 degrees, the typical street wall height, left unobstructed. The average area of the sky dome left unobstructed above 70 degrees was 75 percent.[35]

The absolute and abstract sky exposure planes of both the 1916 and 1961 regulations proved in practice to produce buildings with a range of daylight responses. In other words, the sets of sky exposure planes did not produce a uniform daylighting response. The noncomplying 46 degree sky exposure plane

would have fallen within the permissible range of daylighting performance described earlier. Furthermore, as we have seen, the daylighting standard was consensually determined. It was the practical "best."

We can conclude that the absoluteness of the Euclidean numerical and graphic standards obscures the fact that they are value-based standards. The purported objectivity of Euclidean zoning paradoxically results from the absoluteness of the standards. Administrative objectivity of the standard has obscured the value basis of the standard that is being evaluated.

The Rise of Discretionary Review and the Failure of 1961's Prescriptive Zoning

Less than 10 years after the adoption of the 1961 Zoning Resolution, disaffection with the concrete results of the idealized utopian vision set in. The common wisdom of then and today was that the rigidities resulting from the abstraction and absoluteness of the 1961 Resolution forced the architects and developers to fill the freestanding tower form resulting from the right zoning envelope and thus maximize floor area, density, and profits. This was and is incompatible with the best efforts of architects and urban designers to produce good architecture and good city form. In fact this had been the case under the 1916 Zoning Ordinance, under which the zoning envelope was similarly filled as evidenced by Lower Manhattan and the "wedding cake" or setback structures of Midtown. The difference between the 1916 and 1961 regulations was that the 1916 Ordinance's envelope was loose and could be filled by a variety of drastically different building forms (setback, tower and base, setback slab, and freestanding).

This wisdom, while most often heard from architects and urban designers, was also expressed with great regularity by the developers, bankers, community representatives, and other professional, lay, and governmental constituencies. They posited that the 1961 Zoning Resolution legislated building and city form and that its singular vision was too restrictive and left little room for genuine architectural design quality and innovation. The result was cookie-cutter building that was often ugly and sterile, set in an ill-considered and barely usable public open space that often was neglected. These same buildings also appeared to be insensitive to older buildings that formed the physical context, resulting in visual dissonance. Furthermore, the buildings when taken in the aggregate did not appear to support urban life, particularly traditional street-related public life, but rather seemed to produce an antiurban or minimally a-urban environment of independent structures reminiscent of our worst nightmares of the chaotic suburban strip, but at urban densities.

For the moment, let us put stylistic controversy aside and assume the AT&T Building, executed in the postmodern style, is an exemplary high-rise structure. The same design realigned in a plaza on Sixth Avenue—let us say the Exxon Plaza—in all probability would satisfy neither the architect nor the chorus of critics. The issue is not the design quality of the architectural object per se but rather the type of urban values embodied in the zoning resolution. The free-standing tower in the plaza, be it the unrelenting slab of the Exxon Building or the highly articulated AT&T tower, is a-contextual, and ultimately destructive of the traditional urban form of New York.[36]

As evidenced above, the replicable model, the freestanding tower in an open space or plaza, proved in practice not to be particularly successful. In the effort to provide usable public open space in New York on private property, and light and views to and from new

buildings, the 1961 Resolution managed to throw the baby (traditional urban street-defining buildings) out with the bathwater (the lack of usable open space at grade and light and air). As noted earlier, the Seagram Building turned out not to be a replicable building type, probably because it was viewed as something other than the piece of contextual urban design it was. The Seagram Building demanded the masonry counterpoint of the florentine Racquet Club across the street to function as a foil to the glass walls of the tower. The reflection of the masonry facade across the street in the continuous glass wall of the lobby is as much a part of the design of the Seagram Building as the original low-rise street wall buildings that framed it and the plaza. When another plaza and tower was to be built on the cleared site to the south, public pressure was exerted on both the architect and developer to include a low-rise street wall in their development to continue to define the space created by the Seagram Building. The Seagram Building worked in part because it broke with the urban design conventions of the 1916 Zoning Ordinance and Park Avenue. It was a dissonant note in the landscape of Park Avenue, a one of a kind site-specific building. Unfortunately, the 1961 Resolution had only one model in mind. When the tower and plaza model failed, the Height and Setback regulations of the 1961 Resolution failed with it.

The model failed in many other ways. The loss of retail continuity at the street and the proliferation of plazas and towers that appeared diminished the potential attractiveness of each development. The seemingly endless row of plazas on Sixth Avenue was apparently too much of a good thing. The streetscape was being irreparably wrenched apart.

The nature of our property relationships requires developers to avail themselves of all the Zoning Resolution offered without regard to the developments on adjoining blocks or lots. The plazas were located only where development activity occurred and not necessarily where a plaza might have been both useful and appreciated, making the operations of the 1961 Resolution contingent on the activities of the marketplace, thereby undermining the coherence of the utopian vision. Le Corbusier's utopian scheme for urban order based on the high-rise, high-density tower in the park, zoned land uses, and rationalized road systems was ultimately a traditional physical master plan. Physical master plans, such as the "Plan Voisin" envisaged by Le Corbusier for Paris,[37] were not contingent and as such required the steady hand of the despot to achieve rather than the 40 to 60 years of market-motivated building by individual developers that is characteristic of the private real estate market in New York City.

It undoubtedly is clear to the reader that the litany of the 1961 resolution's shortcomings could fill a book and in fact has.[38] But if the 1961 Resolution had these perceived shortcomings, what could be done to ensure that New York would be the beneficiary of well-designed buildings that when viewed as an ensemble would create the good urban environment? The answer the critics said was simple—relax the zoning regulations that tied the hands of the designers and good architecture and good city form would flow as surely as the East River flows under the Brooklyn Bridge.[39]

The idea that "good" architecture and "good" city form are equivalent has not been borne out in practice, as witnessed by the close packing of the monumental AT&T and IBM buildings on Madison Avenue, nor has the notion that good architecture will result in good urban form been borne out. Nonetheless, the idea was seductive and served to deflect the

physical planner's concerns from the environmental quality of the public streetscape to that of shaping individual buildings.

The design community suggested that their buildings be exempt from the conventions (the tower in the plaza) required by Height and Setback regulations of the 1961 Zoning Resolution. But on what basis should the Height and Setback regulations be waived? Rather than comprehensively reevaluate the value system and structure of the 1961 Resolution, the City Planning Commission opted for regulatory techniques designed to deal with development pressures as they arose on a case-by-case basis, thereby recognizing the contingent nature of development in New York City. In order to overcome the rigid abstractions and absolute numerical standards of the as-of-right tower in the park prescriptive regulations of the 1961 Resolution, the commission moved to expand the bonus concept or the idea that zoning might, if properly done, go beyond restricting a harm to conferring a good.[40] This was to be achieved by manipulating the substantive and procedural rules of the zoning resolution. As a legislative body, the City Planning Commission could waive the rules, reduce rules to the bare minimum, create flexible or contingent rules, redefine the rules, and relax the process.

The City Planning Commission's Counsel's Office, its related Office of Technical Controls, and the Manhattan Office of City Planning were the other activists in the development, evolution, and administration of incentive zoning by negotiation. Incentive zoning had its origins in the 1961 zoning resolution. The shift from as-of-right incentive zoning to the process of incentive zoning by negotiation was revolutionary. The development of zoning text from the Urban Design Group's (UDG) proposals, its interpretation during the negotiation between Department of City Planning and the development team, and the certification of the applicant's project were performed in collaboration with the UDG. The constitutional validity of the concept of "discretionary incentive zoning" was successfully navigated by Department of City Planning Counsel Norman Marcus, who later went on to coedit a book championing negotiated incentive zoning[41] and the inclusion of aesthetic control of building design as a logical extension of the police power.

The entire concept, as Weaver and Babcock have noted, found its origins in the discretionary zoning techniques, floating or conditional zones, including Planned Unit Developments (PUDs), which were developed in the suburbs and sustained by the courts to control burgeoning development after World War II.[42] Discretionary zoning's perceived success was in its ability to tie the piecemeal and ad hoc development of land to larger planning concerns while sensitizing a development's response to the specifics of site and program.

The Discretionary Years: Special Districts and Special Permits

Two vehicles were used that allowed the New York City Planning Commission to waive or modify, in part or wholly, the underlying abstract and absolute regulations: the Special Districts that were mapped for specific areas, and Special Permits, which applied when the use, size, or location of one development lot met certain objective criteria. Both involve discretionary review procedures requiring, in varying degrees, a process of negotiation between the public and private sectors.

The importance to New York City of the concept of negotiated incentive zoning techniques to deal with the site-specific complexities of development and the uniqueness of the area is manifest in the 31 Special Purpose Districts and the 54 Special Permits. Special Per-

mits and Special Districts have two things in common—the use of discretion in determining a new development's conformance to the zoning standard and a floor area bonus for the provision of a public amenity. The waiver and/or modification of the underlying height and setback regulations and the incentive bonus proved to be very popular with developers, architects, public officials, and the concerned public.

In physical design terms, the commission's special district discretionary regulations pursued three paths simultaneously: conservation of the traditional physical fabric of the City through the reiteration of the conventions which created that fabric (e.g., Fifth Avenue); the design of new conventions to which adherence could be evaluated with reasonable objectivity (e.g., Lincoln Square at Lincoln Center); and the negotiation of new conventions in a public design review process that had few if any objective criteria for evaluating the results (e.g., Theatre District). Of the three types of Special Districts, accountability and certainty were strongest in the first, diminished to some degree in the second, and virtually absent in the last type. All types of Special District generally required a lengthy administrative and public review process.

The Special Permits, sometimes called floating or conditional zones, on the other hand, were not mapped and were not designed to protect or advance the unique qualities of a particular area. They fell into three categories: those that applied to unique uses such as public facilities (court houses, bus terminals, heliports, etc.); those that applied to specific types of locations (developments over railroad yards, sites opposite parks of three acres or more, sites adjacent to landmarks using development rights transfers); and those that applied to specific and often unique development sites meeting stated criteria. The main criterion in the third category consisted generally of size, such as commercial developments extended into more than one block, large-scale residential and community facility developments, and Section 74–72, which was operative for Midtown blockfront sites having a minimum lot area.

The first type of Special Permit was designed in the historic tradition of waiving underlying urban conventions for what, in most cases, were important public institutions. Historically, not only was the architecture of the institution intentionally different from that of the context but the site planning also frequently was unconventional and complemented those structures as exceptions to the rule. This approach has its antecedents in historic cities.

The second type of Special Permit was location-specific and hence predictable to some degree. It applied to sites that presented unique design problems that were difficult to anticipate in the abstract. Buildings adjacent to or over a landmark required the proposed structure be responsive to the landmark. Developments over railroad rights-of-way also created unique design and planning considerations.

It was the third type of Special Permit that created the most difficult problems for the planning commission in urban design terms. With criteria written in the most nebulous yet well-meaning prose, objectivity, accountability, and certainty and predictability lost whatever meaning they may have had. Until the adoption of the new Midtown regulations in 1982, the desirability of this type of special permit was, for example, reflected in its growing use in Midtown Manhattan. As-of-right buildings accounted for 100 percent of all floor area built in the period 1960–1964; 87 percent in the period 1965–1969; 36 percent in the period 1970–1974; 14 percent in 1975–1979; and

zero percent in the period 1980–1982. Essentially, the as-of-right system of preregulation described earlier had gone unused for almost 10 years in Midtown and was moribund.

Tailored to ease the development of relatively small sites, Section 74–72 of the 1961 Zoning Resolution merely required a certain size site with a blockfront configuration to qualify. It was, of course, amended frequently to accommodate specific developments.

When coupled to the new array of interior public spaces and the renewed taste for buildings that rise directly on the street, it proved to be the most popular show in town.[43] The bonusable exterior public spaces were internalized[44] and rationalized as a good thing for the obvious reason that the new building, if it were to be marketable, had to cover a considerably higher proportion of the zoning lot than the as-of-right prescriptive tower provisions allowed.

The process of tailoring special permits to the needs of particular developments is endemic to the 1961 resolution and resulted from its rigid form of preregulation and its origin in a specific and singular vision and everyone's delight in the negotiation process. Section 74–72 of the 1961 Resolution allowed the City Planning Commission to modify the height, setback, tower, and coverage requirements for what was construed to be superior design.[45] This generation of special permit buildings—of which the new AT&T and IBM Buildings are probably the best known—caricatured the renewed interest in "context."

The public streetscape-defining attribute of the earlier street wall buildings resulting from the 1916 Zoning Ordinance was, as we have seen, achieved unintentionally by its system of Height Districts. In practice, Section 74–72 ultimately legitimized the practice of placing very tall freestanding towers or slabs of repetitive and standardized floors up to the street line (AT&T, IBM, and I.M. Pei's 490 Park Avenue).

These buildings have street walls with a vengeance! They bear little relationship to the heights of adjacent street walls, create low lighting levels in the street that harken back to prezoning days, and create wind effects on the public space of the street adjacent to those sheer towers that at best are uncomfortable and at worst dangerous.[46] Objective environmental and sensory criteria (one might even say common sense) were discarded for what appeared to be good architecture. In the most profound sense, the Department of City Planning and City Planning Commission found themselves in the awkward position of legislating architectural taste. The developers quickly learned that noted architects, like designer labels, provided a veneer of aesthetic chic and cachet. The fine line between designing buildings and designing cities disappeared while the two activities merged into one. The public's interest in a private design was dramatically expanded. The City Planning Department's role expanded to that approximating an architectural review board or landmarks commission. No longer concerned merely with issues of civic design, the planning commission with its increased degree of intrusiveness in building design, moved from legislating cultural values (civic design) into the more problematic and abstract arena of legislating beauty (architectural design).

By what criteria can some buildings be rejected and others approved? John J. Costonis, in his well reasoned article for the *Michigan Law Review*, "Law and Aesthetics: A Critique and a Reformation of the Dilemmas," forcefully argues that abstract beauty in this country is not a sustainable legal doctrine although it is certainly a sustainable aesthetic philosophy. He states:

> Aesthetic policy, as currently formulated and

> implemented at the federal, state, and local levels, often partakes more of high farce than the rule of law. Its purposes are seldom accurately or candidly portrayed, let alone understood, by its most vehement champions. . . . Its indiscriminate, often quixotic demands have overwhelmed legal institutions, which all too often have compromised the integrity of legislative, administrative, and judicial process in the name of beauty.[47]

By 1980, discretionary zoning, with particular emphasis on Midtown Manhattan, seemed to be out of control. As noted, the environmental effects of the new generation of negotiated buildings often harkened back to the worst excesses of prezoning days. The special permit process was time-consuming and unpredictable. The city planning department staff, community, and planning commission reviews were conducted in the absence of any standards other than those of stylistic preference and political agendas. In a rare show of unanimity, the developers and good government groups suggested that the discretionary approach be abandoned for more accountable and predictable zoning regulations.

In 1980, Kwartler/Jones was retained by the City Planning Commission to develop new Height and Setback regulations for Midtown.[48] The consultants' analysis of the array of pragmatic and conceptual issues suggested that neither the structure of administrative discretion exercised through the lengthy special permit process nor the simple as-of-right structure of prescriptive preregulation characteristic of the 1961 Zoning Resolution was workable any longer. The former, in addition to being time-consuming, had virtually no substantive basis for decision making, while the latter's typological approach that resolved almost all design decisions within the regulations themselves, proved in practice to be aurban (antithetical to the city's traditional urban form) and unresponsive to the changing nature of development in Midtown. While the 1916 as-of-right prescriptive Zoning Ordinance, with its focus on the daylighting and the quality of the public space of the street and its nontypological approach to regulation, proved to be a valuable construct that informed the consultants' response to the issues, it too was incapable of responding to the complexities of development in Midtown in the 1980s.

Given the City Planning Commission's interest in an as-of-right Building Quality System, a variation of Housing Quality Zoning (HQZ) developed for the Mayor's Urban Design Council in 1974 and adopted by the Board of Estimate in 1976,[49] the consultants proceeded to investigate the applicability of the structure of HQZ to the Midtown issues.

Briefly, HQZ is a performance system that recognizes that zoning cannot successfully predetermine the appropriate building form or building type in the abstract but is contingent on a variety of factors including site size and configuration, orientation, context, building program, building technology, and architectural design values. As such it is the antithesis of the typological approach of the 1961 Zoning Resolution. Too many forces and actors are involved in the creation of the model or replicable building type for zoning to predetermine in the abstract.

In a legal context, zoning can at best represent the public interest in the development of the type or model by private individuals acting in their own perceived interest. The public interest embraces the need to protect the environmental quality of the locale—in this case, Midtown Manhattan. This meant the clear enunciation of public policy regarding environmental quality in Midtown. For the devel-

oper, it represented positive obligations to the commons.

More specifically, by definition performance systems are contingent as they assume a multiplicity of "right" answers. The performance structure of Housing Quality Zoning was admirably suited to this purpose because it clearly distinguished between the implicit goals and practices of architectural design (building quality) and zoning as civic design (environmental quality). Civic design achieved through zoning, if it is to take seriously the First Amendment guarantee of freedom of expression, recognizes the pluralist context of architectural design in America.

Nonetheless, zoning must by definition make aesthetic judgments at the gross level of building form although, as Stephen Williams has noted:

> . . . aesthetic judgements often present the type of problem that Professor (Buckminster) Fuller described as "polycentric." Polycentric problems arise when three factors coincide: (1) a multiplicity of possible solutions; (2) an interdependency of relevant factors so that the outcome as to one feature of the problem will affect the outcome as to the other features; and (3) a multiplicity of relevant factors that makes it difficult to trace one solution's superiority to any particular attribute or combination of attributes.[50]

Performance zoning attempts to deal with this issue of polycentricity by specifically recognizing the contingent nature of the first two factors and their resolution in the third. This assumes that the multiplicity of factors can be reduced to a manageable number and that the attributes in combination can be said to be representative of environmental quality. The standard for delimiting the public interest in private design decisions is found in the legal context of procedural and substantive due process. This is similar to the conceptual approach to design outlined by Christopher Alexander in his *Notes on the Synthesis of Form* [51] and often referred to as "fit"—whereby a building design, program, and context are made isomorphic.

The performance structure of HQZ does just that. The system is composed of desirable attributes that are empirically and consensually based and which are clearly described as goals to be achieved: for example, street wall height, street wall length, building height, sunlight on site, sunlight off site, and ground floor activity.

The performance criteria for each attribute are established. Each attribute is given a numerical value reflecting its social desirability, the degree of economic effort to achieve it, and its importance in the building design process (some decisions are more important than others as they set the context for the next level of design decisions). This is then followed by a numerical formula for evaluating conformance to the standards for the particular attribute, which allow for partial compliance. Finally, there are directions for special conditions. In this formulation, the goal to be met is consensually subjective while the performance system of measuring or evaluating goal compliance is objective as in Euclidean as-of-right zoning.

The numerical sum of all the attributes is 100 points. Environmental quality is considered to be achieved when a design accumulates 85 points. Environmental quality is defined as a statistical probability. HQZ assumes that virtually any combination of attributes, scored as to performance and adding up to 85 points, will mean a building has achieved a desirable level of quality. Quality is expressed in equivalencies rather than abstract absolutes and is literally contingent on the

project's context. The system not only allows for trade-offs but requires them. Each attribute interacts with the others through a series of design iterations until the building "fits" the situation represented by a minimally complying score of 85 points. The passing score of 85 points and point values for the attributes ensure that the primary attributes cannot be totally ignored.

It was further realized that any architectural design problem would have either direct or implied conflicts and contradictions. In past zoning ordinances these were rationalized beforehand. These conflicts are the meat and potatoes of a design problem. They intentionally were built into the program to allow resolution on a site-by-site basis by the architect and client. What would seem appropriate in one situation might be less than desirable in another. No two buildings had to emphasize the same areas to achieve the passing score of 85 points. Those involved in the design of a building could instead pick and choose their emphasis. The system allowed for a localized design response which encouraged both freedom of expression and contextual fit. It could be called an existential approach to zoning. Jonathan Barnett put it another way when he observed:

> There are more possible quality design elements than any one building would be expected to include, thus recognizing that design is always a series of choices—that circumstances alter cases, and you can't win 'em all. Sometimes, one objective can be achieved only at the expense of another. The architect can choose appropriate design elements in relation to the existing neighborhood, the shape of the site, the topography, and so forth, instead of adapting the needs of his client to a single stereotype. [Or the tastes of the reviewing urban designers and community groups in a negotiated design—author's note.][52]

Performance zoning is zoning's response to Milton's dictum "Reason is Choice."

Relevant aspects of HQZ's Neighborhood Impact Program were selected for inclusion into the Midtown performance zoning regulations. In addition, daylighting procedures to objectively evaluate each building's daylight performance were developed using the Waldram Diagram mentioned earlier to ensure that the streets and building interiors of Midtown were adequately lighted and that the streets were perceptually open. A subcategory was building surface reflectivity which encouraged the use of light-colored reflective materials to both compensate for an incremental reduction in daylighting and to enhance the brightness of Midtown streets and building interiors.

The zoning standards for the Midtown performance regulations were derived from the Midtown environment. The preferred street wall length and height, for example, were statistically derived and based on the street district, the contextual locus of the development site, and included the buildings along the street on which the proposed building would front. The daylighting standard was formulated from an analysis of existing daylight conditions mentioned earlier. The standard reflected the pedestrian's expectation of daylighting, which was based on the common law principle of a "continuing expectation" similar to the right enjoyed under the English "Law of Ancient Lights." In all cases, the level of performance could be evaluated objectively by a ministerial review for compliance as is required if the regulations are to be administered fairly.

The consultants' proposal was modified during the public review process, before finally being adopted. Numerous buildings have been built since the new Midtown regulations were adopted in 1982. They exhibit a variety

of forms and styles and are in most instances site specific rather than prototypical. If these buildings are representative of the buildings that can be built under the Midtown regulations, then the two apparently mutually exclusive goals of marrying the virtues of discretionary and as-of-right zoning have been reasonably met. The new regulations avoid both the sterile abstractions of prescriptive zoning as well as the indiscriminate use of discretion characteristic of negotiated zoning; they also do not legislate a building type. Most importantly, the boundary that defines the public interest in the design of a private building has been clearly drawn at the level of civic rather than architectural design. The public's interest is limited to the relationship of the gross form of the new building to its neighbors, its street level use, and its daylighting performance. In fact, the system is not biased toward tall, thin towers or lower, bulky "wedding cakes." Both building types and appropriate building forms are complying forms, as are countless others not yet conceived.

CONCLUSIONS

The major components of New York City's zoning resolution, the districting of use, density, and site planning and building form all have strong aesthetic implications if one assumes city form has aesthetic content, e.g., "Paris is a beautiful city." The first two components guide, if not determine in the rough, the location of the residential areas, local shopping streets or districts, and commercial and manufacturing areas. The separation of uses is objectively justifiable under the police power in the case of a nuisance per se where the physical harm is apparent, for example. But separation of uses becomes less compelling when the harm reflects a social and economic policy, for example, mixed-use neighborhoods versus the exclusively residential neighborhood of single-family detached houses.

Similarly, density has aesthetic implications because it dictates not only the building volume that will be perceived by the public but also the volume of people that will use the streets, infrastructure, shops, and cultural institutions. Historically, high density was associated with cities for reasons of economics and proximity. Furthermore, density, as with the separation of uses, has no absolutes until public health issues, such as epidemics resulting from inadequate sanitary and fresh water infrastructure, manifest themselves. Low density is not necessarily better than high density, as the high-density cities of Europe testify (Paris and Rome: 300 to 400 persons per acre). Low density produces one kind of physical environment, high density another for the obvious reason of building volume. High density is contingent on a host of other factors that may or may not make it possible, including cultural adaptation. Jane Jacobs has noted that yesterday's unmanageable cities become today's ideal cities in terms of size and density.[53] Obviously Midtown would not be Midtown at an FAR of 2.

Density regulations always manifest themselves in building volume which is not always directly related to population density. Soho, the city's former manufacturing district with its cast-iron buildings, used to be virtually empty of people, but now is teeming with residents and visitors.

The height and setback regulations both configure the use to be contained in the new building and the building volume generally measured in FAR (a measure of total floor area which assumes a building volume based on minimum floor-to-floor heights and more directly limited by the population density regulations). These regulations give form to the

density. Let us call it perceptual density as distinct from FAR and population density.

A few examples will help explain this point. A typical 17- to 20-story freestanding high-rise apartment house built in an R6 district (e.g., Co-op City) in accordance with the as-of-right regulations of the 1961 Zoning Resolution has the same density as the four- and six-story perimeter block configuration of Phipps Houses in Sunnyside, Queens, designed by Clarence Stein in 1938. The difference is that Phipps Houses covers approximately 43 percent of its lot while the tower/slabs of Co-op City cover approximately 15 percent of their lot. Furthermore, Phipps Houses is a perimeter block building—it defines a completely enclosed interior courtyard, while the Co-op City tower/slab sits in the middle of its lot. Both developments are constructed at R6 density of 100 to 120 persons per acre and an FAR of 2.4.

In Midtown, the so-called wedding cake buildings constructed under the 1916 regulations are approximately equivalent in FAR to the newly constructed AT&T and IBM buildings and the earlier as-of-right tower and slab buildings which line Third, Park, and Sixth avenues in Midtown (Exxon, etc.) In fact, their lot sizes are virtually identical, 30,000 to 35,000 square feet in the case of both the wedding cake Look Building and the freestanding AT&T Building, which are within blocks of each other on Madison Avenue. The physical density (floor area) is the same but the Look Building is approximately 300 feet tall while AT&T is more than twice that height. Clearly, as the two examples illustrate, the size of the lot, the form of the building, the height of its street wall, if any, and the building's siting not only produce different sensations of perceived density but, when replicated by the hundreds, a different perception of density and place in the city—in fact different cities.

From this discussion, it should be clear to the reader that the abstractions of use and density can be configured in ways that will produce dramatically different sensory environments. Assuming for a moment a rational and objective reason for the spatial distribution of uses and maximum densities components, we are left with the choice of how to give form to use and density. The choice is clearly an aesthetic one even assuming there might be functional and economic reasons for the form. Functional determinism of urban form is a poor argument for two reasons. The first is that cities are more than instrumentalities of economic and functional determinism. The second calls into question the idea of functional determinism as evidenced in the dramatically different engineered designs of the rocketry, satellites, and space capsules of the Soviet Union and the United States. After all, even engineers have aesthetic preferences.

If aesthetics, expressed as cultural values, is a major component of city form, the overriding conceptual issue is the legitimate legal basis for intentional aesthetically based zoning legislation. The constitutional safeguards regarding freedom of expression, property rights, and the procedural and substantive due process values embodied in the First (freedom of speech/expression) and the Fifth and Fourteenth (taking of property, equal protection and procedural due process) amendments are complicated further in practice by the cultural context of a pluralist society.

The indiscriminate use of discretion and its questionable results as applied to Midtown and elsewhere in the city might lead us to the argument that aesthetics have no place in zoning. But as we have seen, zoning and aesthetics are inextricably bound together. Rationalizations that zoning is merely an instrument to protect ourselves from harming each other is sophistry at its worst.[54] On the contrary, one

must agree with John Costonis's assessment of the issues:

> I do not agree that the aesthetic enterprise is inherently repugnant to sound legal or social values. But I am persuaded that its second-generation problems, those relating to its actual effects rather than to its ostensible goals, confirm that aesthetic policy making and jurisprudence must be disciplined by the courts and legislatures if the rule, rather than the pretense, of law is to govern. My recommendations reduce to the single prescription that, consonant with appropriate institutional constraints, legislatures and courts should take a much harder look at these demands than they do at present. Legislatures should insist that they reflect values that are reasonably representative of communitywide sentiment; that their implementation falls within the capabilities of the agencies designated to administer them and are thus not unduly vulnerable to subversion, and that they be confined by standards intelligible to property owners, the foregoing agencies, and reviewing courts. . . . Formulated in terms of the foregoing triad of constitutional values (vagueness due process or standards, substantive due process and freedom of expression), each [proposal to legislate aesthetics] traces to the challenge of specifying the harm aesthetic regulation seeks to forestall and of ensuring that these values are not compromised in an attempt to prevent the harm.[55]

Implicit in the Costonis argument is the recognition of environmental change. It translates into zoning as a program for regulating change that is reasonably representative of communitywide sentiment or perceptions. Implicit in aesthetics, sentiments, perception, and cultural values is the concept of beauty. Aesthetic theory aimed at defining beauty has been a favorite cultural activity of civilization for thousands of years. In the past, one theory has tended to dominate the cultural life of a period only to be recast as the society changes. Rather than having the force of law (e.g., zoning), each was culturally enforced by an aesthetic orthodoxy as manifest in a national style of the ruling class. The autocratic nature of such societies is at odds with our pluralistic society. In our social context, it is not only incumbent on us to determine community settlement but also to come to grips with beauty in regard to legislation. Put another way, what concept of beauty can be sustainable and justifiable constitutionally, while simultaneously having perceptual credibility in a pluralistic context?

While Costonis primarily is concerned with the "beauty question" as it pertains to historic preservation, the issues he discusses are relevant to aesthetically based zoning, although to a lesser degree. The "beauty question" is far less problematic when one shifts from landmark structures and landmark districts based on museum aesthetics to the design of city form. The fundamental difference between city design and historic preservation is a matter of the degree of intrusiveness of the legislation on private property and freedom of expression. First, generic as-of-right zoning as defined in this chapter is unlike historic preservation because its concerns are more narrowly drawn, for example, zoning should not be concerned with architectural style. Furthermore, the aesthetic component in zoning is culturally based and builds on consensual community values obviating the beauty question. For example, aesthetically based zoning could and has been used to make each place or community in the city more of what it is in order to avoid homogenizing the city as modernist practice has tried to do. The issue as to whether the place is beautiful or not is irrelevant: for example, Times Square and the

honky tonk associated with it. If a city composed of unique and identifiable places and communities is desired by public consensus, the rough outlines of the appropriate urban form can be regulated by zoning, still leaving room for a broad spectrum of design responses. Zoning designed as an instrument of civic design becomes the context in which buildings are designed and individuated as demonstrated in the Park Avenue example.

To amplify the point, the definition of beauty must relate directly to the way in which we perceive the world around us physiologically and psychologically. It must recognize the constitutional and psychological values embodied in freedom of expression by encouraging a diversity of design responses while simultaneously defining the level of unacceptable environmental dissonance. The definition of beauty must be resolvable into objective methods and standards that can be uniformly applied and periodically reviewed, and be responsive to the contingent nature of development vis-à-vis individual private property rights. It is worth repeating again that the definition of beauty must be inclusive rather than exclusive—that is, representative of community sentiment, but limited by a clear understanding of the public interest in the development of a piece of private property.

Structurally generic as-of-right zoning should be capable of equitably balancing the forces of change with the forces of stability. This is a particularly thorny issue in New York City as there is no ostensible overall physical master plan for development nor has a consensus for one developed. In New York City, the history of planning is synonymous with the history of zoning. Zoning not only precluded planning (the planning commission was established in 1938—22 years after the first zoning resolution) but is planning in New York City with the exception of urban renewal and the vague "plan" produced in the late sixties.[56] New York City has resisted the pull of traditional planning with its physical and/or policy plans. The idea of the mandatory plan was promulgated by the courts in response to the abuse of discretionary power. On balance the "plan" has been a failure in controlling these excesses whether in the suburbs or in the cities. [Note: Every time New York City's zoning resolution is amended, the plan is amended simultaneously making a mockery of both planning and zoning.] Weaver and Babcock are right when they suggest:

> At the very least, however, if this placebo is to be administered in place of real medicines, cities should be exempted from the treatment. Mandatory planning as it relates to cities is an unnecessary interference with the urban land use process . . . nor is it [the plan] a cure adopted to the problems that cities do have. The complex problems of maintaining and redeveloping a major city are not likely to be much helped by the development of long-range goals, broad policies, or detailed future land use maps, which is what most mandatory planning legislation mandates. City planning for a city demands a rather different orientation.[57]

They suggest that planning for major cities be reoriented so that it begins by answering the questions:

- What *must* we do today to deal with currently perceived problems?
- What, given our current resources and the present demands on them, can we expect to do tomorrow to deal with the problems and concerns we now foresee?
- If nothing unexpected happens, what might we want to do in the future to avoid problems that a continuation of current trends is likely to produce?

• Given all our answers to all the previous questions, where will the city be in five or ten years, and how acceptable will that be?[58]

This articulates an approach to planning and zoning that recognizes the contingent nature of urban development and offers a method for contextualizing short-term decisions while recognizing that these cumulative decisions ultimately give form to the city. Given the failures of the rigidities of the Euclidean prescriptive zoning and its crude and simplistic system of preregulation which attempts to resolve all design issues in the body of the regulations regardless of the complexity and uniqueness of each situation, and the failures of the discretionary approach which in its ad hoc nature sacrifices standards and a longer term policy context, zoning regulations demand a structure that will incorporate the positive aspects of both approaches in an easily administered generic as-of-right system. Conceptually, such a structure has to recognize that: Zoning is a powerful technique with which to design the form of our cities; standards are relative and not absolute and tend to be culturally based; the process of design of a particular building involves contradictions, conflicts, and mutual exclusivities that cannot be resolved in advance in the body of regulations (an explicit rejection of the typological approach); and good city form is the result of the orchestration of many factors. Furthermore, recalling Dostoevski's Underground Man admonition that man's "most advantageous advantage" is free choice and Milton's definition of reason as "reason is choice," the structure for zoning must be existential—that is, responsive to the fact that we never really know. As-of-right generic performance zoning with its contingent structure meets these criteria.

AUTHOR'S NOTE

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