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PATTERNS OF TIME, PLACE, AND CULTURE: LAND USE ZONING
IN PORTLAND, OREGON, 1918-1924

by

MARGRETE BERNARD MERRICK

A thesis submitted in partial fulfillment of the
requirements for the degree of

MASTER OF SCIENCE
in
GEOGRAPHY

Portland State University
1998

THESIS APPROVAL

The abstract and thesis of Margrete Bernard Merrick for the Master of Science in Geography were presented April 24, 1998, and accepted by the thesis committee and the department.

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ABSTRACT

An abstract of the thesis of Margrete Bernard Merrick for the Master of Science in Geography presented April 24, 1998.

Title: Patterns of Time, Place, and Culture: Land Use Zoning in Portland, Oregon, 1918-1924.

Until recently, few have questioned the notion that the separation of uses in land use zoning is inherently correct. Many observers of the city are now suggesting that zoning, as it has been practiced in this country over the last 80 years, has created cities that are fractured and function poorly. Others propose that zoning should be reconsidered as a remedy for urban dysfunction. They suggest that the whole notion of zoning be rethought.

The purpose of this study is to uncover some of the underlying rationales and methodologies that set the model for zoning. This study examines the rationales behind the classification and location of land use zones in a fast-growing area of Portland, Oregon, for its first zoning ordinance through history, culture, and geography.

Between 1919 and 1924, two ordinances were prepared using two very different methodologies. The first of these was designed by nationally known consultant, Charles H. Cheney, using the latest scientific methods. After its rejection in the polls, a second ordinance was developed by a

prominent group of realtors in conjunction with the city planning commission using more intuitive methods. This "realtors' code" (MacColl 1979) was approved by the Portland electorate in 1924. Some fifty years later, the Portland planning commission would identify zoning as having played a significant role in the deterioration of the Buckman neighborhood in the study area.

The comparison of the rationales and methods behind the locations of zone boundaries in both ordinances against the locations of actual uses in the study area, reveals the powerful influences of social Darwinism, laissez-faire attitudes, and newly developing social science methods on the association of zoning with the separation of uses and the land use patterns that were created.

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CHAPTER I

INTRODUCTION

We have become accustomed to the right of government to zone land. Until recently, few have questioned the notion that the separation of uses in land use zoning is inherently correct. Many experts are now suggesting that land use zoning has played a major role in creating cities that are "fractured," (Barnett 1995) and function poorly. Others propose that zoning should be reconsidered as a remedy for urban dysfunction. They suggest that the whole notion of zoning as it has been practiced during the last 80 years in the United States be rethought.

In the first two decades of the 20th century, before the wide-spread adoption of zoning, advocates sold it as an end-all solution to urban problems (Figure 1.1). Zoning would prevent urban congestion, protect single-family neighborhoods from the invasion of inappropriate uses (Figures 1.2, 1.3, 1.4), stabilize or boost property values, create an orderly foundation on which further planning could be done, and above all, enhance the health, safety, and general welfare of the citizenry as a whole.

However, there were concerns even in then: concerns about the adaptability and adoptability of a "foreign" (German) concept thought to be "too undemocratic" for Americans (Davies 1958:78); questions about the acceptability of zoning by the courts as well as by the American people in

the laissez-faire environment of the early 20th century; a sense among some planners, such as Frederick Law Olmsted, that planners were playing with forces that they did not understand and that this could create serious unexpected and undesirable consequences; concerns that existing ordinances were not based on any scientifically justifiable rationale, any clearly stated goals, any plan.

Figure 1.1. "Zoning will prevent this."
Source: Cuicci and Dal Co (1983).

Early advocates believed that zoning must be based on a scientifically supportable rationale not only to avoid charges that zoning was arbitrary and capricious—making it vulnerable to constitutional challenge—but to ensure that resulting ordinances would produce the desired results.

"ILLUSTRATING PORTLAND'S NEED OF A ZONING SYSTEM"

Apartment with small grocery store.

Apartment butting into a residence district. Note the fact that the apartment has an effect on the dwelling in regard to sunshine.

Illustrating Portland's need of a Zoning System.

Figure 1.2. Invasive uses: apartments and grocery stores. Photographs and captions from the Begemann Report (1918).

"ILLUSTRATING PORTLAND'S NEED OF A ZONING SYSTEM"

Store on residence street, which has been vacant five years.

Stores which have raided a residence street. Their only use is for voting places on election day.

Illustrating Portland's Need of a Zoning System.
1918.

Figure 1.3. Invasive uses: grocery stores.
Photographs and captions from the Begemann Report (1918).

Figure 1.4. Invasive uses: flats in Buckman.

However, what was meant by "science" in those days was highly conditioned by social Darwinism which shaped both zoning's outcome in the Supreme Court and planners' understanding of the processes which create urban form. Some years later, geographers would also be influenced by social Darwinism as manifested in "human ecology" in their understanding of urban form.

The thesis of this study is that zoning, as we know it and practice it, is not a neutral planning tool, but rather a product of culture, time, and place which became manifest in the nation's first zoning ordinances. The legacy of these ordinances lives on in the physical reality of our urbanized areas and in the assumptions—particularly the separation of uses—that many planners, policy-makers, and citizens still make about zoning. The classification and the location of land use zones do matter. If zoning has not lived up to its promise, it is important to understand why.

It is also the thesis of this study that a large part of the answer lies in the theories and methodologies that early zoning advocates employed to justify and implement zoning. Much of the literature about zoning has focused on its technical/legal and social/exclusionary aspects; the focus of this study, however, is historical, cultural, and most importantly, geographical.

The purpose of this study is to uncover some of the underlying rationales and methodologies which set the model for zoning as we have come to know it. This study attempts to better understand this model by examining the rationales behind the classification and location of land use zones in a fast-growing area of Portland, Oregon, for its first zoning

ordinance through history, culture, and geography. Two ordinances were prepared using two very different methodologies. The first of these was designed by nationally known consultant, Charles H. Cheney, using the latest scientific methods. After its rejection in the polls, a second ordinance was developed by a prominent group of realtors in conjunction with the city planning commission using more intuitive methods. This "realtors' code" (MacColl 1979) was approved by the Portland electorate in 1924. By examining and comparing the rationales and methodologies behind the taxonomy of land uses and the locations of land use boundaries in both ordinances against the locations of actual uses the unregulated cityscape, it is hoped that some light may be shed on the sources of their flaws.

ZONING'S FAILURES

Early on there were misgivings about possible unforeseen consequences of zoning even among its supporters. At the second national conference on city planning in 1910, Frederick Law Olmsted, who with Daniel Burnham had led the City Beautiful Movement in city planning, admitted that he was "overwhelmed by 'the complex unity, the appalling breadth and ramification of real city planning'" (quoted in Scott 1969:118). He was concerned that he and his colleagues were "dealing . . . with the play of enormously complex forces which no one clearly understands" and that efforts to control these forces too often led to "unexpected" and "deplorable" results (quoted in Scott 1969:118).

By the 1932, 766 municipalities had adopted "comprehensive" zoning ordinances (Davies 1958:146). Throughout the 1930s, ordinances across the country were criticized for having dedicated too much land to

multi-family, commercial, and industrial uses (Davies 1958:184-185; Bartholomew 1932; Coffin 1934). Advocates began to express concern that zoning was being undermined by the large number of variances being granted in cities nationwide (Toll 1969:281; Feagin 1989:83). The impact of variances on the effectiveness of zoning and resulting land use patterns is yet to be fully understood and is still considered a serious issue (Burgess 1996).

In the 1950s and 1960s, questions were centered around the technical aspects of zoning such as what standards should be set for the land use categories and who should handle the various elements of the zoning process (Burgess 1996:218). Some planners had become disillusioned. They observed that rather than protecting low-income and working class neighborhoods, ordinances appeared to be designed to serve the upper-income suburbs and protect income-producing land (Burgess 1996:219): "zoning promoted the well-being of some parts of 'the public' better than others" (Burgess 1996:235).

The exclusionary quality of zoning, the potential for separating land users with the separation of land uses, was there at the outset; however, the awareness of this reality among those most negatively affected came slowly and is reflected in the zoning related court cases in the 1970s and 1980s—*Southern Burlington County NAACP v. Township of Mt. Laurel II* (1983), low and moderate income households; *Village of Arlington Heights v. Metropolitan Housing Development Corp.* (1977), racial discrimination; *Robinson Township v. Knoll* (1981), mobile homes; *Taxpayers Ass'n v. Weymouth Twp* (1976), elderly—to name a few

(Mandelker and Cunningham 1990). As illustrated by these zoning related court cases and others during these two decades, the connection between the spatial separation of uses and the segregation of people was clearly established.

The evidence and the argument persists. The belief that zoning promotes economic and racial segregation was convincing enough to middle- and lower-income residents of Houston, Texas, that they were largely responsible for voting down the adoption of zoning for that city in 1993 (McDonald 1995:139). Moreover, it was alleged by the opponents of zoning in Houston that, based on the evidence, zoning would inflate housing costs by limiting the density of housing development, cause urban sprawl and waste energy, create a new bureaucracy that would be susceptible to graft and corruption, and because zoning could restrict the location of churches, it would undermine the freedom of religion (McDonald 1995:139). Indeed, the application of zoning appears to have had a double standard when it comes to class. Burgess posits that while zoning may have prevented the most harmful intrusions into working-class areas, zoning changes have allowed some incompatible uses into low- and moderate-income neighborhoods (Burgess 1996:236).

Lynch suggested, in the 1970s and 1980s, that the "coarse grain" that was the inevitable result of strictly separated land uses not only reinforced social segregation but produced monotony and inflexibility as well: "As he manipulates his clearly drawn maps and ordinances, the planner may be reducing the access to people and activities" (Lynch 1984:406). In his *American City Planning Since 1890* (1969), Scott criticized Charles H.

Cheney's Berkeley, California ordinance (1918) for its emphasis on homogeneous zones:

The intent to protect the single-family and duplex structures from being overshadowed by bulky apartment houses may have been admirable, but by its inflexibility the ordinance precluded the possibility of interesting combinations of dwelling types under appropriate controls. This particular kind of zoning orthodoxy, with its insistence on strict compartmentalization of uses, not only tended to make some residential areas monotonous; in many instances it also made cities less convenient by unduly separating services from residential areas (Scott 1969:162).

This particular kind of "zoning orthodoxy," which had its origins in the early days of zoning, became, in the minds of many, indistinguishable from zoning itself. Baar suggests that the "overstatement of the evils of apartments" was a "prerequisite" to the success of single-family-only districts in the courts (Baar 1992:39). According to Baar (1992), just after the Supreme Court's decision in *Euclid*—which declared zoning to be constitutional—some judges and courts continued to question the rationality of zoning that precluded multi-family dwellings: ". . . soon *Euclid* became embedded in stone and the constitutionality of single family-only zoning became indisputable" (Baar 1992:46).

Furthermore, zoning has essentially eliminated other housing options for the poor. The single-room occupancy hotel and the boarding house are two prototypes which have been either zoned out of existence or allowed to be replaced by other sorts of development (Barnett 1995:170). In *How Buildings Learn: What happens after they're built* (1994), Brand discusses the importance of buildings to be able to be adapted to society's changing demands, in other words, the ability of a building to house

different uses over time. Zoning ordinances have been modified since the 1920s but with regard to the notion of use segregation, little has changed—even in the face of the changing needs of the citizenry:

People find ways around zoning ordinances—quietly setting up home businesses in their garage or basement, quietly moving into industrial lofts—but like barrio dwellers they can succeed only so far before authority discovers and curtails them. Quelling change, zoning quells life (Brand 1994:79).

Innovative changes in the use of existing structures has been frowned upon by planning commissions who don't think twice about granting variances to influential developers for mainstream construction projects. Too often existing uses have been "crystallized" by zoning, like "embedd[ing] a fly in amber" (Baker—attorney for Ambler in *Ambler v. Euclid* (1926)—quoted in Brooks 1989:14). This has essentially removed any incentive for architects to design buildings which could be easily converted to other uses at some future time.

During the last decade, zoning classifications and locations have also been challenged in light of changing definitions of what is meant by "family:"

The type, family, as used in municipal zoning ordinances, is a culturally bound discourse. The language both persuades and informs us about values and attitudes. It presumes a specific type of social tie, the nuclear family type—parents living at home in a unit unrelated to the workplace—as the apocryphal norm (Ritzdorf 1994:125).

In spite of profound changes in family structure, most zoning ordinances "remain basically unyielding in their nostalgic interpretation of 'correct' community land patterns in which work, home, and services are spatially separated" (Ritzdorf 1994:117). Perin concurs with this assertion:

Land-use planning, zoning, and development practices are a shorthand of the unstated rules governing what are widely regarded as correct social categories and relationships—that is, not only how land uses should be arranged, but how land users, as social categories, are to be related to one another (Perin 1977:3).

The importance of the classification of land uses and the location of land use zone boundaries has moved front and center for so-called "New Urbanists" and "neo-traditional" planners. They believe that land uses are segregated, transport mechanized, and public spaces fragmented "not because of economics or planning philosophies, but because our planning tools, especially the zoning ordinances, mandate it" (Calavita 1994:535). Neo-traditionalists reject the long held belief that land use patterns are mostly a result of economic forces:

Along with [the] sticky question of physical and social form is the erroneous belief that our community's physical form is the result of free choice, the market's wisdom, and the statistical sum of our collective will. In reality, our patterns of growth are as much a result of public policy and subsidies, outdated regulations [zoning], environmental forces, technology, and simple inertia as they are a result of the invisible hand of Adam Smith (Calthorpe 1993:10).

In *The Next American Metropolis: Ecology, Community, and the American Dream* (1993), Calthorpe claims that in addressing the problems of the fractured city, he is taking an "ecological" approach:

This book is about the ecology of communities. Not about the ecology of natural systems—but about how the ecological principles of diversity, interdependence, scale, and decentralization can play a role in our concept of suburb, city and region. . . . These principles stand in stark contrast to a world dominated by specialization, segregation, lack of scale, and centralization (Calthorpe 1993:9).

This is a very different view of ecology from those articulated by sociologist Robert Park (1916,1925,1929, 1929a, 1936, 1936a) in his "human ecology" which had a profound influence on mainstream ecological analysis. This mainstream approach to ecology has tended to produce, according to Feagin (1989), highly capitalistic views of urban form, seeing city patterns as inevitable, efficient, and neutral (Feagin 1989:75). This "market-knows-best" approach to ecological analysis has shaped the work of urban geographers, particularly Berry and Kasarda (Feagin 1989:76). Much of their analysis has emphasized the importance of capitalistic entrepreneurs' profit seeking motives in metropolitan expansion and contraction (Feagin 1989:76). Feagin criticizes this work for not adequately taking into account other factors that are important in urban development such as poverty, class conflict, and government subsidy programs (Feagin 1989:76). Moreover, this market-driven view of ecology has tended to reinforce early notions of the "correctness" of the spatial separation of land uses. Given the spatial implications of land use zoning, it is surprising that urban geographers have given it very little attention. Ritzdorf, Burgess, and Schein, however, have taken a more cultural approach. For them, zoning is a socially constructed notion. Schein, for example, has commented that the ideals embedded in zoning "incorporate notions of spatial and visual discipline imposed on residents and landscapes" (Schein 1997:672).

Lozano takes a "systems" approach to urban form which leads him to conclusions similar to those of Calthorpe:

. . . urban patterns are being increasingly 'simplified' owing to the narrower range of activities and population within each

segregated enclave, where less variety demands less complexity. . . . This segregation process is a case of overspecialization, which, . . . leads to a rapid reduction in the capacity of the system to adapt, an especially dangerous constraint since 'adaptability' is essential for social as well as for biological success (Lozano 1990:134).

Neotraditionalists—including Duany and Plater-Zyberk, Calthorpe, Nelessen, Barnett and Bookout—suggest that it was the blind acceptance of the "Euclidean model" of zoning—which mandated the strict separation of uses—by planners and policy-makers across the country that drove the "idiot codes" (Scully 1991:20) which produced this "dangerous" specialization. Some go a lot further in their criticism. Zoning has not been an "innocent instrument," according to Luxembourg planner Leon Krier. In his opinion, zoning has been "the most effective means in destroying the infinitely complex social and physical fabric of pre-industrial urban communities, of urban democracy and culture" (quoted in Brand 1994:79).

ZONING AS A SOLUTION

Not everyone has given up on zoning including the neotraditionalists and New Urbanists who have criticized the Euclidean model so severely. Seeking more flexibility than the Euclidean model allowed, new zoning tools were developed during the 1960s, 1970s and 1980s. The most significant of these was the "planned unit development" (PUD). Within PUD's, higher residential densities are permitted in order to create a greater potential for common open spaces. Moreover, PUD's can be single-family, multi-family, or both (Mandelker and Cunningham 1990:578). Perhaps less widely known but extremely interesting is Kendig's "performance zoning" (1980) which was modeled after McHarg's (1969)

approach to environmentally sensitive design. Performance zoning is based upon McHarg's overlay analysis in an attempt to minimize negative impacts to the environment (Kendig 1980).

Weaver and Babcock proposed in 1979 that zoning should be reconsidered as a significant tool in reshaping urban, not just suburban, America:

There is no question that many urban problems—even urban land use problems—cannot be solved by the mere application of a new set of land use regulations. . . . But [this] is no reason for ignoring the potential inherent in such a traditional, well-understood, and universally accepted regulatory device as zoning (Weaver and Babcock 1979:14).

Some may question whether zoning, or rather the implications of zoning, have ever been "well-understood," but there is a strong argument for using a device which has been as "universally accepted" by the public as zoning. When asked his opinion about the possibility of reintroducing zoning as a means of significant change in the city, William Smith, director of development for the Department of Community and Economic Development in Detroit responded:

Zoning? My personal preference is just to get rid of it. However, a lot of people attach almost primary significance to zoning. If they're going to do that, that means it has social and political value. They would more likely support constructive changes in the name of zoning, even though it really isn't zoning, than they would the creation of a whole new law (quoted in Weaver and Babcock 1979:19).

Smith's comments certainly beg the question: what is zoning anyway? Again, neotraditionalists and New Urbanists are redefining zoning based on new interpretations of ecology. Instead of the segregation of uses, they talk about the integration of uses and the connections between

activities. Instead of exclusion, they emphasize inclusion. Moreover, the definition of what comprises a "nuisance" has been changed. Nelessen states that in writing new zoning codes for the hamlet, village, or neighborhood core, a mixture of uses should be included to provide daily services, goods, and jobs for its residents (Nelessen 1994:234). He also suggests that a list of "obnoxious" or "unacceptable" uses should be prepared. His example includes not only the expected noxious industries and automobile painting shops but drive-in restaurants as well—but not the "neighborhood" restaurant (Nelessen 1994:235).

Rezoning is being reconsidered as a necessary tool for significant urban and suburban change in many places across the country including Portland, Oregon. In October of 1996, Metro, the Portland metropolitan area's regional government, gave all of the cities and counties within its urban growth boundary two years to adopt new zoning regulations to make room for new jobs and housing (Nokes 1996). In most cases, it is assumed that the new codes will increase residential densities and encourage mixed-use-commercial/residential-developments in already established areas. Portland's city council, in December of 1997, voted to allow people to create accessory housing units or "granny-flats" on single-family lots (Christ 1997), a practice which defies traditional zoning orthodoxy. "Town planners" Lennertz and Coyle, in a scheme to reinvigorate the downtown of Forest Grove, a town within commuting distance of Portland, have written an entirely new code which, if adopted, will be used to "cure" the damage of previous zoning laws (Gragg 1996).

Will these new approaches to zoning work? Barnett (1995) believes that the addition of design methods will ensure better results:

Design is a way of making complex decisions where a series of potential actions are interrelated and choices on one issue affect choices about others. Such decisions are made routinely in the design of houses and more complex buildings, in engineering, and in landscape architecture. Design methodology applied to public policy means . . . understanding that zoning regulations inevitably shape buildings and that these design consequences should be anticipated and intended (Barnett 1995:179).

Many question whether this new orthodoxy will be any more successful in creating socially and racially integrated, vigorous, well-functioning places for everyone to live in and work in than the previous one. Neo-traditionalists' heavy emphasis on design methodologies and environmental determinism has led some to suspect that the approach is too simplistic to effectively address the complex reality of our "fractured" cities and suburbs.

STUDY OVERVIEW

Given current concerns about the failure of zoning to fulfill its promise and the importance that planners, particularly neotraditionalists, are now giving to new approaches to zoning, this study attempts to better understand zoning's shortcomings by uncovering the underlying rationales and methodologies used to determine the classification and location of zone boundaries with particular emphasis on the spatial implications of two ordinances proposed for Portland as an unzoned city.

The Portland example provides an opportunity to (1) look at the unregulated landscape for clues to the contention that the processes of invasion and succession of inappropriate uses into single-family

neighborhoods warranted the intervention of zoning, and (2) to compare two very different methodologies in locating zone boundaries—one "scientific;" the other shall be called, for lack of a better term, "intuitive"—and test them against the location of existing uses in an area where it would be determined by planning officials 50 years later that zoning had been instrumental in deteriorating the neighborhood.

To this end, this study first attempts to provide a historical, social, and philosophical context to the development of Portland's first zoning proposals. This includes a brief description of zoning's German origins, America's early piecemeal attempts at zoning before the nation's first comprehensive zoning ordinance in New York City (1916), and the importance of the New York ordinance. This study also recognizes the importance of social Darwinism and human ecology to early planners' understanding of urban form and the Supreme Court's decision in *Euclid v. Ambler* (1926) which declared zoning to be constitutional. Therefore, a description of the tenets of social Darwinism and human ecology is considered critical to creating the context for the Portland ordinances.

The remainder of the study focuses on a study area in Portland. It discusses the Cheney Proposal, his theories, methods, supporting studies (Cheney's industry survey and Lawrence Begemann's 1918 invasion study), and the ordinance itself. It includes a similar discussion of the 1924 ordinance or "realtors' code." Primary sources including reports, raw survey data, notes, bulletins, as well as newspaper articles and accounts were all considered essential to reconstructing the rationales and methods behind the ordinances examined in this study.

Central to the study are two map analyses. One is an invasion study to check Begemann and Cheney's contention that the invasion of inappropriate uses so seriously threatened the viability of the city that zoning was necessary.

Both Cheney and the realtors claimed that they had located their land use zones based on the location of the existing uses. The second map study is essentially an overlay analysis which attempts to see the relationships between the actual uses and the proposed land use boundaries.

Finally, the study describes some of the long term effects of the 1924 ordinance on the Buckman neighborhood in the study area.

CHAPTER II

ZONING'S ORIGINS AND PHILOSOPHICAL CONTEXT

THE GERMAN CONTRIBUTION

Land use zoning's origins and much of its development lie in Germany. "Use" and "bulk" regulations or zones were in general use in Germany by 1894. From Germany zoning spread, in the early part of the 20th century, to all European countries except France, to England, Canada, and Japan (Williams 1922:210-211).

The earliest form of zoning employed by German cities was a simple form of use zoning. In some German states, legislation allowed for the separation of residences from "objectionable" manufacturing operations. Under the Empire, this right was derived from Imperial "Industrial Law" which required objectionable manufacturing establishments to obtain a license from the state or local authorities subject to conditions. Through the implementation of this requirement, municipalities began to create one or two special protected districts in which objectionable establishments, usually heavy manufacturing, were prohibited. Such protected zones often consisted of most of the land area of a city leaving only one or two carefully chosen areas for industry. This very simple system was considered adequate for many of Germany's smaller municipalities into the 1920s (Williams 1922:211).

Use restrictions provided a certain amount of order in German cities, however, they did not prevent congestion. Bulk zoning was first used in Germany as a way to plan additions to cities. Historically, German cities had grown in accordance with generations of rules, or traditions, regarding the height and area of buildings that were uniform throughout the city (Williams 1922:212). After centuries of growth, these cities had become, by the end of the 19th century, enormously congested. By the 1870s, with the rapid urbanization of the population, it became necessary for many cities to expand. As long as new additions were under the same regulations as the old city, congested conditions continued.

The relatively inexpensive cost of land at the periphery of the city allowed German authorities to create regulations to prevent the congestion of the old city from occurring in these new areas. The earliest bulk zoning consisted of two separate regulations, one for the old city, and one for new additions to the city and the suburbs. The first city to adopt a bulk zoning ordinance was Altona, a suburb of Hamburg, in 1884 (Williams 1922:212).

Many smaller German cities found that this combination of simple use zoning and two sets of bulk regulations was adequate. It was an effective approach because it reflected the reality of the value of land in these places: land was uniformly more expensive in the old city and significantly less costly at the city's edge. However, in Germany's larger cities the pattern of land values was far more varied and complex requiring fine-tuning to the initial conception of inner city and outer city bulk zones. In larger cities land values appeared to gradually decrease from the center to the periphery indicating a need to create many zones of increasing bulk

regulation. This system of bulk regulation, which took the form of a series of concentric circles, was first known as the "Zone System" and was later referred to as "graduated building regulation" (Williams 1922:212).

Over time, German authorities recognized that many large cities had developed multiple centers with high land values and that a concentric system of bulk zones simply didn't reflect reality. As a consequence, the concentric zones were essentially broken up (Williams 1922:216). It was decided in Stuttgart, for example, to regulate by street and not by zones. The street or groups of streets became the unit of zoning (Williams 1922:216). In other cities greater refinements were made. Dusseldorf not only had five zones covering the city and street regulations for "special" streets, but there were eleven classes of streets identified by different housing types. The differences between these classes were often minimal. These street classifications combined with the zoning regulations created a situation which caused some German city planners to suggest that such regulation had become too detailed and intricate (Williams 1922:217).

Perhaps what is important here is not so much the intricacy of these ordinances but the fact that this detail and intricacy resulted from an attempt to understand and respond to the forces at play within each urban environment. The concentric zones of Frankfurt's ordinance were a reflection of the economic reality of that place. However, German city planners recognized that the Frankfurt approach should not be applied everywhere because in some cities the spatial aspects of the economic reality were different. Dresden's ordinance was crafted so as to accommodate the multiple centers which had developed there.

Planners appear to have remained flexible enough to have been able to respond to new understandings of existing and changing conditions. The resulting geometries created by each of these approaches appear, not surprisingly, to reflect and predict some of the dominant economic models of urban form in the 19th and the first half of the 20th centuries: 19th century German agricultural economist, Johann Heinrich von Thunen's concentric land use zones as they reflect the value of land in relationship to the "market;" real estate economist, Homer Hoyt's Sectoral Model of the 1930s; and geographers, Chauncy Harris and Edward L. Ullman's Multiple Nuclei Model of the 1940s. The Germans, in the early years of the 20th century, apparently were able to recognize all of these patterns in their cities and used them to inform their systems of zoning.

Moreover, unlike the zoning ordinances that would be enacted in England and the United States, German ordinances generally did not forbid businesses, even light manufacturing, from residential districts except by private covenants. Nor did they create business or commercial zones from which manufacturing was excluded (Williams 1922:215). The separation of businesses from residences which became the rule in England and the United States, was less common in Europe where, almost without exception, apartments were located above shops and offices (Williams 1922:215).

EARLY AMERICAN RESPONSES

American planning pioneers—including landscape architect Frederick Law Olmsted; Edward M. Bassett, New York City Public Service Commissioner and head of New York's Heights of Buildings Commission

which would recommend in 1913 that the entire city be zoned; Benjamin C. Marsh, executive secretary of New York's Commission on Congestion and Population; as well as attorney Frank Backus Williams, who would draft New York City's pioneering ordinance—were deeply impressed, even "infatuated" (Toll 1969:128-129) by the pleasant and orderly appearance of German cities as compared to the crowded, dirty, and chaotic conditions found in American cities despite their City Beautiful plans (Hall 1988:58; Scott 1969; Toll 1969: 128).

Olmsted was especially struck by the comprehensive quality of German planning. A city plan included not just a plat for the layout of streets but the whole code of building regulations, health ordinances, police rules, and taxation system to support the city's physical development (Scott 1969:97). Furthermore, many cities owned large reserves of land which put them in the advantageous position of being able to have a direct influence on the cities' future development (Scott 1969:97).

The zoning systems that German city planners had employed appeared to be the key that the American planners were looking for. Because zoning had a longer history and had advanced farther in Germany than anywhere else, German zoning ordinances were collected and examined. According to Olmsted, German zoning appeared to ". . . give each district as nearly as possible just what it wants, to protect it from deterioration at the hands of a selfish minority, and to give stability to its real-estate values" (Scott 1969:97; Toll 1969:129).

There were some who were concerned that zoning could not be successful in this country because of fundamental differences between German and American cultures; chief among them was the greater acceptance of public control over private property in Germany and the sense that zoning was too "undemocratic" to be popular in America (Toll 1969:130; Davies 1958:78). Advocates of zoning recognized that the success of zoning in this country would depend on the development of a distinctly American approach to planning reflecting American individuality, local traditions, and local ideas (Scott 1969:98). Despite these differences in cultures, German zoning systems would profoundly influence the approach that American reformers would attempt to take.

Early Zoning in the United States

Before the passage of New York City's comprehensive zoning ordinance in 1916, only piecemeal attempts at zoning-like regulations were implemented in the United States. During the 1880s, first the city of Modesto in California and then San Francisco employed use zoning in an effort to control the spread of Chinese laundries (Hall 1988:58). In 1899, a federal statute was passed which limited the height of buildings by zones in the nation's capital (Williams 1922:265). The cities of Baltimore and Indianapolis set height limits for buildings in small areas in 1904 and 1905 respectively. Boston established height districts throughout the entire city in 1904. In response to concerns expressed by real estate professionals and homeowners over the potential invasion of residential neighborhoods by commercial and manufacturing establishments, several cities, during this time, created residential zones from which industry, commercial uses, and

sometimes multi-family dwellings were excluded (Scott 1969:152).

However, in most cases, prior petition or subsequent consent of a certain proportion of the property owners in the particular district was required rendering planning virtually ineffective (Williams 1922:266; Scott 1969).

Until the enactment of New York's zoning ordinance in 1916, Los Angeles was the most completely zoned city in the nation. Williams suggested, in 1922, that the Los Angeles case was important because of its influence on subsequent zoning ordinances for other west coast cities. Between 1909 and 1915, a number of ordinances were passed regulating various features in several sections of the city. By 1915, the entire city was zoned in one way or another (Williams 1922:267). There were districts in Los Angeles rarely found elsewhere such as: motion picture districts; public garage districts; undertaking districts; cow districts; and billboard districts (Williams 1922:267). Essentially, the city was divided into a large residential district where light manufacturing was permitted. There were twenty-seven industrial districts in which all industries were allowed. There were also approximately one hundred "residence exception" districts which were scattered within the residential districts where all but the most objectionable industries could locate (Williams 1922:267).

All of Los Angeles may have been zoned, however, like all zoning of the pre-planning era, it was entirely piecemeal and haphazard; there was no over-arching rationale or plan on which zoning had been based. Williams, for one, believed that the American trend toward zoning without planning was "deplorable" (Scott 1969:152). Alfred Bettman, the Cincinnati lawyer who would, twelve years later, defend zoning for the

Village of Euclid, Ohio in *Euclid v. Ambler Realty*, stated at the 1914 conference on city planning that zoning, unsupported by planning, would not be held constitutional by the courts. "Aesthetics" would not be adequate to sustain a residential-district ordinance or statute. A clear connection must be established between the ordinance and the public's "safety," or "comfort," or "order," or "health" (Scott 1969:153). In other words, the constitutionality of zoning would depend upon comprehensive planning preferably supported by scientific study (Scott 1969:153).

Science and Planning

By the end of the first decade of this century, the shift away from what was by then seen as primarily planning for aesthetics (the City Beautiful) to what Scott calls the "City Functional" (planning by science) was nearly complete (Scott 1969:117). By 1915, Pittsburgh and Boston had used economic data, survey and statistical methods in an attempt to more adequately inform city planning efforts. City planners "wanted to be 'scientific' in their diagnosis of the ills of the city and base their proposals on arrays of 'facts' and sound deductions drawn therefrom" (Scott 1969:117). More enlightened city administrators, influenced by the business community's enthusiasm for the principles of scientific management, wanted to be "current" and thus "scientific" in their approaches to governance (Scott 1969:117).

The failure of the "City Beautiful" began to reveal what seemed to be the overwhelming complexity of urban environments. "The city was a chaos of conflicting purposes, of separate, fragmentary planning" which resulted in a city where citizens could in no way thrive (Scott 1969:118).

Science was needed to somehow sort it out. To that end, it would be necessary to collect and analyze data.

George B. Ford, architect and foremost advocate of planning as a science, suggested that before comprehensive planning could begin information would have to be collected under the following headings: streets; transportation of people; transportation of goods; factories and warehouses; food-supply markets; water supply and sanitation; housing; recreation; parks, boulevards, street planting; architecture; laws; and financing or methods of paying for improvements (Scott 1969:121). According to Ford, planning should be a technical endeavor in which personal judgment would be minimized by the scientific method. From Ford's point of view, the political process and community values—which he referred to as "local prejudice"—only got in the way of good science (Scott 1969:122). It is worth noting that an assistant of Ford's, Harland Bartholomew, would, twenty years later, be engaged by the city of Portland to develop a comprehensive street plan for the city and its environs.

In fact, streets or circulation systems, transportation of goods and people, and the relationship of factories to both transportation and housing would dominate the planning profession. In considering the needs of industry and the desire to protect residential areas, it became clear that a mechanism which would ensure the separation of various activities was essential. As a result, planners were increasingly determined to adapt German zoning systems to American conditions. It was believed that the division of the city into zones, each with its own purpose, would be in the best interest of the people at large. Besides, this "division" appeared to be a

"natural" trend in American cities. This "naturally occurring" tendency, bolstered by social Darwinism, would become an important justification for the design and the adoption of zoning ordinances in the post war period as well as zoning's constitutionality.

The Nation's First Comprehensive Zoning Ordinance

New York City, in 1916, was the first city in the nation to adopt a comprehensive zoning ordinance of the modern type (Mandelker and Cunningham 1990:165; Williams 1922:268). In *The Law of City Planning and Zoning* (1922:268), Williams identifies the New York ordinance as the first systematic and complete plan of use and bulk zoning in the nation.

However, the New York ordinance was not a stellar example of scientific planning, rather it was the product of legitimate concerns of city officials about increasing congestion in lower Manhattan and the political maneuverings of powerful special interests. Public desire for civic improvement and those constituting what Olmsted called the "selfish minority"—Fifth Avenue business owners who saw the invasion of the garment industry as an imminent threat—formed an uneasy alliance in order to get the zoning ordinance enacted. What was important about the this ordinance was New York's influence on the rest of the nation, not so much the ordinance itself. New York's ordinance stimulated more cities to enact citywide zoning than any other single influence (Scott 1969:153). Moreover, the example that it set in terms of its history—the process, the players, the winners and losers—would be followed in one way or another by cities throughout the country.

New York's Ordinance. It took two years to develop a zoning scheme. The overriding consideration for the drafters of the ordinance was that the regulations would be able to withstand legal challenge. Every restriction was tied to the public welfare, safety, health, morals, and convenience; the restrictions would be applied to the entire city; and every district's boundaries would be defined on a map (Scott 1969:156). As a result, the ordinance tended to be conservative (Scott 1969:155). Rather than address long term changes that might be socially desirable, the ordinance tended to accept the status quo (Scott 1969:155). Many sections of the city were essentially frozen in height, bulk, and use.

The zoning ordinance provided for three categories of use districts: residential; commercial; and unrestricted. Five different height districts were created in which the permitted building heights were based upon a relationship to the width of the adjoining street (Scott 1969:156). The ordinance also provided for five kinds of area or bulk districts which regulated the size of yards and courts (Scott 1969:156).

The combination of height and area (bulk) regulations was new and a direct response to the competition for light and air in lower Manhattan. The combining of use and bulk regulations throughout the city was also innovative, undoubtedly intended to be used against the garment industry. However, the use, height, and bulk regulations could be combined in so many different ways that the ordinance was extremely confusing.

The New York City Building Zone Resolution of 1916 did not apply retroactively to existing lawfully established buildings and land uses (Mandelker and Cunningham 1990:165). Rather the approach was

intended to prescribe a remedy for existing problems through future development.

Williams, who drafted the ordinance with Bassett, later admitted that because of its "pioneering nature," the New York ordinance had many shortcomings not the least of which was its lack of vision. The New York ordinance ended up designating a collection of zones or districts based upon the immediate demands of a few, not a comprehensive plan based upon science. Bassett and Williams had been obsessed by their concern that the ordinance withstand legal challenge. They knew that if the regulations were applied to just sections of the city, such as lower Manhattan and the garment district, they could be struck down in the courts due to their arbitrary nature. Ironically, although Bassett and Williams carefully tied each zoning classification to the public's health, safety, and welfare, because the delineation of districts wasn't based upon a well articulated rationale such as a long-range comprehensive plan, it appeared to be arbitrary. In 1916, not long after the adoption of the ordinance Williams wrote in the June and August issues of *The American City*:

"New York has sinned so greatly in the past that its districting has had to be based altogether too much on congested skyscrapers and tenement house conditions." "Other cities can do better than we [New York] and will be most culpable if they fail to do so" (Williams 1922:273).

PHILOSOPHICAL INFLUENCES: SOCIAL DARWINISM AND HUMAN ECOLOGY

Social Darwinism

The philosophy of Englishman Herbert Spencer was so pervasive among the intellectual elite during the latter years of the 19th century and the first decades of the 20th century (Pascal 1951:11; Toll 1969:13) that it had a remarkable influence on the rationales developed both for and against zoning in the courts and on how zoning would be played out on the landscape.

Spencer was a friend of evolutionist Charles Darwin and coined the phrase "survival of the fittest" (Pascal 1951). Seeing evolution as the "iron law of the universe," Spencer linked natural science to the social sciences in his "social Darwinism" (Toll 1969:13). Man, society, and the state were results of a gradual and lengthy process that would continue throughout eternity. The dynamic force was the impulse to "adapt" to the environment. Whatever—from the individual cell to man—possesses "vitality" adapts (Pascal 1951:10). According to Spencer, man changes his color according to temperature, develops larger intestinal organs if he habitually eats innutritious food, becomes "fleet" and "agile" in the wilderness and "inert" in the city (Pascal 1951:10). Progress was not an accident but a necessity (Pascal 1951:11). The evolutionary process was cruel but essential: "The poverty of the incapable, the distresses that come upon the imprudent, the starvation of the idle . . . are the decrees of far-seeing benevolence. . . ." (Spencer quoted in Pascal 1951:11).

The state, for Spencer, was the result of increasing population. Man was essentially a solitary creature and therefore the state was "unnatural," a deviation from the law of liberty (Pascal 1951:12). However, the state was a necessary, if temporary, evil. Its true function was to secure the adaptive process. Once this was achieved, the state would no longer be necessary (Pascal 1951:12). Laissez-faire was society's true condition (Toll 1969:13). The proper role of the state was limited to the preservation of order and the prevention of disputes (Pascal 1951:12). If the state should go beyond these limits, it would be doing an injustice in that it would be a detriment to the fundamental force of adaptation:

Instead of diminishing suffering, it eventually increases it. It favors the multiplication of those worst fitted for existence, and, by consequence, hinders the multiplication of those best fitted for existence—leaving, as it does, less room for them. It tends to fill the world with those to whom life will bring most pain, and tends to keep out of it those to whom life will bring pleasure. It inflicts positive misery, and prevents positive happiness. (Spencer quoted in Pascal 1951:13).

Justice was to be found in the condition of man's rights before the existence of the state. By becoming a member of society, man had in no way given up his original, solitary rights. His only concession was to behave in such a manner as to not interfere with others' individual rights (Pascal 1951:13). "Liberty, not majority rule, was held to be the true index of democracy" (Pascal 1951:14).

Spencer's thinking not only appealed to intellectuals but it also offered to American post-bellum business tycoons, political leaders, and even Supreme Court Justices a rationalization for the often brutal practices and intense competition out of which the elite amassed their power and

wealth (Toll 1969:14). They "survived," or succeeded, because they were "fittest." Moreover, this was a natural process not to be interfered with.

Spencerian thought and the Supreme Court. The Spencerian approach to understanding the "natural laws" which governed the functioning of society was fundamental to Justice George Sutherland who would write the Supreme Court's majority decision in *Euclid v. Ambler Realty* holding zoning to be constitutional in 1926 (Appendix A). An Associate Justice from 1922 to 1938, Sutherland was considered by contemporaries to be the "living voice of the Constitution" (Pascal 1951:xii). No other judge, at the time, spoke for the majority in so many important cases (Pascal 1951:xii). Defining the limits of the executive, legislative, and judicial branches, his was the voice of a peculiarly Spencerian constitution (Pascal 1951:xii). Sutherland not only adopted Spencer's notions of liberty, evolution, and progress in his understanding of the Constitution, but he adopted the philosopher's methodology. In spite of all the data Spencer used to defend his arguments, his starting point was always a theory to which the facts must conform (Pascal 1951:15). This deductive method characterized all of Sutherland's work including the *Euclid* decision (Pascal 1951:15). And the fact that "the theory" was Spencer's had a major impact on an important chapter in the interpretation of the American Constitution (Pascal 1951:15) as well as the design, interpretation and impact of zoning law.

On the face of it, an assumption could be made that the adoption of the social Darwinist point of view would dictate against the state interference implied by the implementation of zoning. Social Darwinist

philosophy suggested that if man's environment affects man's evolution, then the "intelligent shaping" of that environment would guarantee that evolution would produce a positive outcome (Toll 1969:18). According to this theory, controls designed to eliminate crime and corruption, and promote democracy were not only acceptable but within the social Darwinist framework. Zoning would be promoted in cities across the country, including Portland, in this way. Furthermore, Justice Sutherland would argue, in *Euclid* (1926), for increased state intervention via zoning based upon the Spencerian argument of "increased population" but also zoning's direct link to the public's health, safety, morals and welfare.

Human Ecology

Spencerian notions would also play a crucial role in the understanding that planners began to develop about the social and physical make-up of the city. The belief in the existence of "natural" areas, which was critical to Cheney's arguments in favor of land use zoning in Portland, appear to have been justified by what was then a new approach to understanding the social and spatial organization of cities—human ecology. This approach had its foundation in concepts and principles developed by plant and animal ecologists, and related work by geographers and economists during the 19th century (Berry 1977:4). Newspaper reporter and sociologist, Robert E. Park became its chief proponent. During the second two decades of the 20th century, Park developed and articulated the concept of human ecology in a series of papers, articles, and monographs.

As a newspaper reporter in turn-of-the-century Chicago, Park witnessed the "invasions" of immigrant populations into that city and

observed that their subsequent "adjustment" resulted in seemingly predictable patterns of settlement. Park was particularly intrigued by the similarity between this process and the Darwinian "struggle for existence." Just as plant and animal communities sorted themselves out through the natural processes of competition, dominance, succession, and segregation, so too, Park theorized, did the human community.

The processes of dominance and competition were, according to Park (1936), responsible for shaping and locating the "natural" or "functional" areas of a metropolitan community such as the slum, the rooming-house area, the central shopping area, and the banking center (Park 1952:151–1936). All resulting natural areas, within the city, formed a "territorial complex" in which they were both competing and interdependent (Park 1952:152). Competition in plant and animal communities appeared to be relatively unrestricted. In the cultural community, however, individual competition was restricted by conventions, understandings, and laws. The individual was more free to compete at the economic than the political level, and more free to compete at the political than the moral level (Park 1952:157).

Because dominance tended to stabilize either the biotic or the cultural community, it was indirectly responsible for succession in both communities (Park 1952:152). Succession was "the orderly sequence of changes through which a biotic community passes in the course of its development from a primary and relatively unstable to a relatively permanent or climax stage" (Park 1952:152). The "cultural community" developed in similar ways to the biotic, however, the process was more

complex. In Park's scheme, inventions and "catastrophic changes" appeared to have a more important role bringing about sequential changes in the cultural community than in the biotic community (Park 1952:153).

Finally, the segregation and social selection of a city's population that occurred with a city's growth resulted in the creation of "natural" social groups as well as "natural" social areas (Park 1952:170):

Every American city has its slums; its ghettos; its immigrant colonies, regions which maintain more or less alien and exotic culture. Nearly every large city has its bohemia and its hobohemia . . . These are the so-called *natural areas* of the city. They are products of forces that are constantly at work to effect an orderly distribution of populations and functions within the urban complex. They are 'natural' because they are not planned, and because the order they display is not the result of design, but rather a manifestation of tendencies inherent in the urban situation; tendencies that city plans seek—though not always successfully—to control and correct (1929) (Park 1952:196-1929) .

For the purposes of this study, Park's paper, "The City: Suggestions for the Investigation of Human Behavior in the Urban Environment," (1916) and his article, "The Urban Community as a Spatial Pattern and a Moral Order," (1925), are particularly relevant given their publication dates.

In "The City: Suggestions for the Investigation of Human Behavior in the Urban Environment," published in the same year that New York City adopted the nation's first comprehensive zoning ordinance (1916), Park set down a framework of research questions that would shape both his understanding of the social and spatial organization of the city, and his approach to that investigation—human ecology. Park described the city as "a product of nature . . . particularly of human nature," not "merely a

physical mechanism and an artificial construction" (Park 1952:13). There were forces within the urban community which "tend to bring about an orderly and typical grouping of its population and institutions" (Park 1952:14). Furthermore, he defined the science which was attempting to isolate these forces or factors and describe the "typical constellations of persons and institutions which the co-operation of these forces produces" as "human" as opposed to plant or animal "ecology" (Park 1952:14). All things that brought about both a greater mobility and a greater concentration of urban populations—things such as transportation, communication, steel construction, and elevators—were considered primary factors in the ecological organization of the city (Park 1952:14).

"The Urban Community as a Spatial Pattern and a Moral Order" was originally published under the title "The concept of Position in Sociology" in 1925, just one year before the Supreme Court's decision in *Euclid v. Ambler Realty* (1926) and one year after Portland's electorate approved their city's first zoning ordinance. It is a well developed statement of the spatial implications of human ecology which lend credence to the notion of right and wrong locations for various land uses. Moreover, in his emphasis on the typical rather than the actual, Park developed an argument for a quantitative—statistical—approach to describing and explaining urban social and spatial morphology (Park 1952:172-173).

Again, Park stressed that the city was not merely an administrative area; it was "a product of natural forces" with boundaries of its own making (Park 1952:167). As it grew, its population segregated itself into "natural social groups" and "natural social areas" which could be most

clearly seen in the "Chinatowns, the Little Sicilies, and the other so-called 'ghettos'" of the city (Park 1952:170). However, other natural areas included the central business district with its own distinct morphology, where shops, hotels, theaters, wholesale houses, office buildings and banks ". . . tended to fall into definite and characteristic patterns, as if the position of very form of business and building in the area were somehow fixed and determined by its relation to very other" (Park 1952:171).

Outside of the central downtown area were industrial and residential suburbs, dormitory towns, and satellite cities which seemed "to find in some natural and inevitable manner, their predetermined places" (Park 1952:171). Between the boundaries of the central business district at the center and the suburbs at the periphery, natural areas—defined by the mobility the population—tended to take the form of a series of concentric circles (Park 1952:171). What was most important, however, was that "everywhere" communities tend to conform to some pattern and that pattern is "invariably" a constellation of "typical" urban areas that could be geographically located and spatially defined (Park 1952:172).

Social Darwinism and human ecology—then being defined by Park—came together in zoning's legal and social justifications. Moreover, just as social Darwinism created a legal foundation for zoning, the ideas behind human ecology created an argument for the actual delineation of those zones.

CHAPTER III

PORTLAND'S FIRST ZONING PROPOSALS

By World War I, the city of Portland had made two attempts at city planning using the expertise of nationally recognized consultants. In 1903, John C. Olmsted of the firm Olmsted Brothers, landscape architects from Brookline, Massachusetts, visited Portland in connection with the preparation of plans for the Lewis and Clark Exposition. During that visit he also made plans for park and highway improvements (1904). Olmsted's plans were the first of two City Beautiful planning efforts that the city made in an attempt at cosmetic improvement (MacColl 1979:293).

Although Olmsted's plans were limited in scope, they laid a foundation on which Edward H. Bennett of Chicago built his Greater Portland Plan, published in 1912 (Mills 1932:13). Bennett's was a typical City Beautiful vision of a city consisting of grand boulevards, parks, and a waterfront embankment patterned after London and Budapest (MacColl 1979:293). In spite of the citizens' overwhelming approval of the plan's concept in 1912 and the city council's adoption of the plan in 1917, it was essentially ineffective due to the lack of legal authority (Mills 1932:13; MacColl 1979:293). It was advisory not mandatory. Moreover, with time, the plan appeared to be inadequate. Bennett, in 1912, had not been able to foresee the barrage of automobiles that would overwhelm the city after the war.

In the years immediately following World War I, Portland's city fathers took a far more pragmatic approach to city planning. Now the goals of planning centered around a diagnosis of the growing problem of traffic congestion and its solution (MacColl 1979:293), and what was considered to be a severe housing shortage (Abbott 1983:72). The city fathers would once again turn to an outside expert—this time, Berkeley architect/planner Charles H. Cheney—for advice.

As the consultant to the Berkeley city planning commission, Cheney had gained national recognition in the field of planning, particularly zoning. Cheney reported at the ninth national conference on city planning in 1917, that he had taken what was then considered a unique approach, at least in the United States, to "use" districting in his design of the Berkeley zoning ordinance. His position was that just as residences should be protected from industry, so should industry be protected from residences (Scott 1969:161). The worst housing conditions and poverty were inevitably found in factory districts. Moreover, whenever special paving for heavy hauling with spur tracks in sidewalks was proposed—for the benefit of the industrial activities in these districts—these improvements were inevitably held up by the protests of homeowners (Scott 1969:161). The logical solution, according to Cheney, would be to prohibit residential uses from factory zones—and this he did in the Berkeley ordinance.

Cheney emphasized in all of his zoning work, including Portland, the rigid segregation of uses (Scott 1969:162), as opposed to New York's emphasis on height and bulk restrictions. This was a trend that would sweep the nation. The Berkeley ordinance provided for twenty-seven

classes of districts including separate districts for single-family residences, two-family dwellings, group houses, and apartment houses. Cheney believed that the strict compartmentalization of uses was essential to protect property values, industrial activities, and the primacy of the single-family residence. Unlike the City Beautiful planners before him, he used science to substantiate his positions and to design his plans.

During 1917 and 1918, a ship building boom in Portland created a housing shortage which made it difficult for employers to keep their workers (Abbott 1983:72). In 1918, Cheney was hired by the city to conduct a detailed study of housing supply and demand which was intended to result in comprehensive suggestions for public facilities, recreation, schools, and the regulation of land development (Abbott 1983:72). Many of the city's business leaders, especially Mayor George Luis Baker, enthusiastically supported Cheney's efforts. Cheney's national reputation added legitimacy to the city's planning endeavors and his involvement added Portland to the growing list of the nation's large cities which were engaged in "modern" planning.

In his first preliminary report (October 1918) to the Housing Survey Committee, Cheney summarized the results of a questionnaire given to 216 employers and included a survey of housing vacancies conducted by another volunteer committee. Cheney's analysis concluded that although housing for single men was adequate, there was an acute need for small houses and family apartments—only 300 units were available for 1,500 families (Abbott 1983:77). The need was expected to increase in the winter to 3,400 housing units (Abbott 1979:77). Cheney's recommendation was

that the Cooperative Housing Association should provide 2,000 inexpensive units as soon as possible (Abbott 1983:78).

The thrust would change, however, with the end of the war, from the provision of cheap rental housing to the promotion of home ownership through an "Own Your Own Home" campaign and with that change came a shift from a focus on the quantity of houses to the quality of housing (Cheney 1918a:6-10; Abbott 1983:78). Much of the cheap housing that had been built was substandard. Cheney recommended that the city adopt the housing code which had been developed by city building inspector, H.E. Plummer, the Portland Chapter of the American Institute of Architects, and the Housing Association (Cheney 1918b:3).

The code was unanimously adopted by the city council on January 22, 1919 (Abbott 1983:78). However, it was understood all along by Mayor Baker and the housing committee that underlying this work was a desire to reinvigorate the city's comprehensive planning efforts. Cheney firmly believed that effective planning could not be accomplished without land use zoning, and to withstand legal challenge, it would have to be based on a supportable rationale. To bolster this position, Cheney quoted the City Attorney of Los Angeles, who had been instrumental in the Supreme Court's decision in *Hadacheck v. Sebastian* (1915), in his *Third Preliminary Report on Housing and City Planning Survey of Portland* (1919):

It is my opinion that it [zoning] will prove practical only in cities where natural development has impressed certain uses upon certain portions of the city to the practical exclusion of other uses. The city having in a way found itself say, by legislation, restrict the development along the lines already generally established, so that the character of improvements in one neighborhood may not intrude to the detriment,

within the meaning of the police power, of the general character of improvements in another neighborhood. This is the principle underlying the Los Angeles zoning law, and in my opinion, is the only principle upon which safe city planning can be based. –Attorney for the City of Los Angeles (Cheney 1919).

This would be the underlying rationale that Cheney would use in his efforts to promote zoning in Portland. Portland was, in fact, a city where land uses were "naturally" sorting themselves out. The purpose of zoning was to encourage that natural process, presumably, for everyone's benefit.

To further this effort, the Housing Commission requested funds for additional housing data, industrial development plans, and for districting and building regulations in order to "stop the invasion of home neighborhoods by types of buildings unsuited to them and the holding back of industrial districts for lack of protections and municipal improvements" to prevent the "demoralization" and "discontent" of labor, and the loss of property values, rents, and property taxes (quoted in Abbott 1983:79).

The Portland City Planning Commission had been established by council ordinance on December 26, 1918 (LTK 1975:2; MacColl 1979:296). The ordinance was written by Cheney, who had also drafted, earlier in the year, the state enabling legislation which authorized the formation of city planning commissions. Mayor Baker supplied the political leadership for its passage. The commission, which was appointed by the mayor to represent various community interests, was made up of seven of Portland's most prominent citizens who had been previously involved in planning issues: J. P. Newell, president, represented the American Society of Civil Engineers; J. C. Ainsworth, vice president, represented the banks;

architect, A. E. Doyle and architect, Ellis F. Lawrence represented architects and builders; E. B. MacNaughton represented the real estate business; Ira F. Powers represented the Chamber of Commerce; and B. W. Sleeman represented organized labor (Abbott 1983:80). Ex-officio members were Mayor Baker; city attorney, W. P. LaRoche; and O. Laurgaard, city engineer. Lawrence and Sleeman had served on the Housing Survey Committee; Ainsworth and Powers served on the Housing Committee.

A. L. Barbur, city commissioner of Public Works, was the city council's chief advocate of planning (MacColl 1979:296). In his view, the city's most pressing problems were: poorly planned streets; the need for street improvements; and the lack of land use zoning (MacColl 1979:296). The need for a zoning ordinance was underscored by the planning commission's first months' work which involved primarily land use concerns—the location of various non-residential uses in residential areas (MacColl 1979:296).

Cheney was methodical in his approach to developing and implementing his zoning ordinances. He reported to the planning commission, shortly after its establishment, that in order for the process to be rational, scientific, and orderly, the following steps would be necessary:

1. Gather evidence of existing tendencies of development - Use of Property map, Height map, Area diagrams, building count, etc.
2. Preliminary determination of the necessary district classes and boundaries.
3. Discussions with the Commission and preliminary agreement on form of above.

4. Preparation of preliminary form of zoning ordinance.
5. Consultations as to district boundaries and regulation with civic organizations and each neighborhood of the city.
6. Agreement on tentative zoning report incorporating the result of neighborhood consultations, preliminary ordinance and plans.
7. Public hearings before the Commission on preliminary zoning report.
8. Agreement on final zoning report, plan and ordinance and submission to the City Council.
9. Introduction of the ordinance and public hearings thereon before the Council.
10. Passage of the ordinance by the Council.

(Cheney 1919)

In a footnote to the above list, Cheney put the role of zoning in perspective:

Important as the passage of the zone ordinance is, the fact must not be overlooked that it is simply the first important step in city planning, based on which many other equally important steps depend. While the city can best take up one of these matters at a time, the imperative necessity for determining main traffic arteries, paving program, readjustment of railroad terminals and lines, knitting together and completion of school park and recreation system, boulevard system, and other improvements of living and working conditions in one correlated plan, must be kept fully in mind (Cheney 1919).

Zoning was for Cheney fundamental to planning. No other planning decisions could be made responsibly without the guidance of a zoning ordinance. All of Cheney's efforts, his industrial surveys, housing studies, schools and recreation assessment, his playground and park survey, and

his use and heights of existing buildings maps were carried out with the promotion and development of a zoning ordinance in mind.

THE CHENEY ZONING PROPOSAL

Foundations and Supporting Evidence

Building codes, an industry survey and Uses and Heights of Existing Buildings Study (both of which were conducted by Cheney), and an invasion study (referred to here as the Begemann Report) provided the foundations and supporting evidence that Cheney needed to justify the zoning of Portland. What follows are descriptions of these and, in the case of the industry survey and the Begemann Report, more detailed examination.

The Building Code. Use restrictions were not new to Portland. The location of some uses had to be approved by council even before the adoption of zoning. Under Section 706 of the 1918 Building Code (Ordinance 33911), it was necessary to obtain a permit from the City Council in order to alter or construct a building for any of the following uses: hospitals; buildings for the treatment of the insane; stables containing more than two animals; large garages; dog pounds; blacksmiths; soap, candle or chemical factories; dry cleaning establishments; gas plants or tanks with a capacity of over 5,000 cubic feet of gas; boiler shops and sheet metal working plants; brick, tile, or terra cotta factories; stoneware or earthenware factories; junk or rag shops or junk yards; fuel yards, wood or coal; planing mills; packing houses or plants; acid works; wood-working plants employing over 10 persons; oil storage or sales buildings containing over 1,000 gallons not including oil stored in tanks underground; oil tanks

outside of buildings containing over 15,000 gallons; tanneries; saddle factories; amusement parks; powder factories; public dance halls; roller skating rinks; wool pulleries; hide and skin warehouses; creameries employing over five persons; tents with board floor used as a residence (Cheney 1919a:12).

Section 707 required that the application for a permit for any of the above uses must include a plan giving the location of the building in question together with all of the buildings within a 200 foot radius of the structure. The application must also include the names and addresses of the owners of these buildings (Cheney 1919a:12).

Section 708 specified that all of the property owners within 200 feet of the building in question would be notified as to the application and the date of the hearing of protests against the granting of the permit. "The granting of the permit will not be approved by the Council wherever it appears that the granting of the same is or may be detrimental to public health or safety, or detrimental to the welfare and growth of the city" (Cheney 1919:12).

This was the building code that Cheney (1918b:3) supported as a stop-gap measure until a zoning ordinance could be adopted. It provided for some measure of control over the location of some of the more obnoxious land uses. It is notable that apartment houses were included under these restrictions but grocery stores, retail establishments, and offices were not. At any rate, it was a piecemeal approach with only the vaguest of underlying principles to guide the council's decision-making process.

The Industry Survey. By late 1918, Cheney had already begun to compile much of the data which he would use to make his case for zoning. A major portion of his *Housing Survey Committee Report #1* (1918) was dedicated to a survey of 215 industrial concerns having 10 or more employees (Cheney 1919b:69). Because the approach to attracting new industry to Portland had been unfocused, it seemed to be getting "much less of new payrolls, increased prosperity and wealth than this city is entitled to" (Cheney 1919b:67). Cheney (1919b:67) believed that an "ultimate plan" for the industrial districts of the city was urgently needed. The survey included such information as: the names, addresses and products of the plants; the classification of employees by gender; the employees' dependents; average weekly wages; the nationality of employees; freight-disadvantages reported; freight-spur tracks needed; street needs; difficulties in securing raw materials; reasons for locating in Portland; suggestions for zoning boundaries; answers to questions regarding factories; number of employees requiring houses; number of employees owning own houses; passenger transportation needed for employees; suggestions for improving the business climate; the future of plants after the war; Portland's advantages over other cities; its disadvantages over other cities as a center of industry (Cheney 1918).

For the purposes of this study, the sections of the survey regarding zoning boundaries and questions about various industries are particularly enlightening. This first report consists of raw survey data; product types are keyed to the responses. Cheney's methodology is somewhat confused because identical questions were not always asked—undoubtedly a result of

different people conducting the surveys. It also appears from the answers to the survey questions that the factory owners did not have a clear understanding about what was meant by zoning.

The questions which most directly deal with zoning come first in the report. Some industries were asked: "If unlimited industrial facilities can be provided by the city only in certain concentrated districts, what would you suggest as general boundaries of such zones, by streets? Others were asked: "If unlimited industrial facilities such as spur tracks , heavy pavements, extra fire protection, etc. can be provided by the city only in certain concentrated districts, what would you suggest as general boundaries of such industrial zones by streets?" (Cheney 1918)—although it appears that there were only two responses to this question. Out of the 44 responses reported, 11 (25%) said an industrial district should be located along one or both sides of the river; 5 (11%) suggested what is now the northwest industrial area; 5 (11%) suggested areas in north Portland, particularly the peninsula area; 4 (9%) suggested areas in the inner eastside; 1 suggested that the district should be within a 3 mile radius of City Hall; 1 indicated that "A boundary that would include all industries already located, as all new industries can undoubtedly locate within a boundary so described." Five (11%) responded that they had "no opinion," hadn't "studied the matter," were "not prepared to say," would just as soon "leave it to those who are interested." The remaining 17 responses (39%) indicated no location and tended to be general comments ranging from positive to negative: "Industry should be concentrated;" "Existing conditions will be satisfactory until close of war;" "It is hard to limit such

industrial zones. As the city grows, the zones are bound to enlarge more or less rapidly and to encroach upon districts looked upon as distinctly residential. Such zones should be as compact as possible but not limited in any hard and fast way by streets;" "Believe the city should accommodate itself to industrial growth wherever located" (Cheney 1918). Aside from the obvious locations along the river, these responses couldn't have given Cheney a mandate for where to zone industry or to zone at all.

The next survey questions drive more directly to the point: (1) "What kind of factories would you like to see concentrated together for mutual self protection, etc.?" (2) "Would the establishment, adjoining your factory, of bone or fat boiling factories, etc. hurt your business?" (3) "Would you like the city to encourage such business in your district or in separate districts?" (Cheney 1918). Out of a total of 208 responses, perhaps it is not too surprising that questions #2 and #3 had an extremely high response rate: question #1, 71 or 34% responded; question #2, 190 or 91% responded; question #3, 170 or 82% responded. Cheney's questions this time were clearly calculated get a pro-districting reaction.

Sixty-six percent of the respondents chose not to answer the somewhat ambiguously worded question #1. Of those who did respond, 51% said that activities associated with fire danger, other hazards, or odors should be separated from their businesses. Twenty-one percent said that they would like to see similar or related industrial activities clustered together. Seventeen percent said that it made no difference to them whether factories were concentrated together or not. Four percent simply answered "yes;" 3% answered, "no." Finally, 4% of the answers didn't

appear relate to the question. Clearly, there was concern (51%) among these businesses about hazards and noxious odors although the aforementioned sections of the building code were intended to address those issues. Those respondents who said that clustering similar or related businesses would be a good idea and the "yes" votes were probably most helpful to Cheney. Together they make up 25%—far from a consensus, however. If those for whom concentration made no difference are added to the "no" votes, 20% saw no reason for concentrating factories.

If the responses to Cheney's first question were unclear, they were not for the second two. By asking in question #2, "Would the establishment, adjoining your factory, of bone or fat boiling factories, etc., hurt your business?" and question #3, "Would you like the city to encourage such business in your district or in separate districts?" (Cheney 1918) he was blatantly inciting a particular response by deliberately choosing activities that were both hazardous and odiferous. Eighty-three percent of the respondents said "yes" to question #2. Many stated that they would not be able to keep employees if these sorts of factories were located adjacent to them. Sixteen percent said "no" to this question. Some suggested that although their business would not be affected, others might be. Of the two responses that make up the final 1%, one said only that such factories should not be located in less congested areas; the other response was incomprehensible.

After having stimulated the respondents' thinking as to the disadvantages of being located adjacent to obnoxious industries, Cheney then asked about "districting:" Would you like the city to encourage such

business in "your" district or in "separate" districts? An overwhelming 92% of the respondents to this question said "yes" to separate districts. In fact, 62% of those who had responded in the previous question that activities such as bone or fat boiling would not "hurt" their businesses said "yes" to this question. Of those who answered it, 6% said "no," and 2% gave unclear responses.

The conclusions of the industry survey, reported in the *General Report on City Planning and Housing Survey of Portland, Oregon, March 1919*, focused on the responses that best suited Cheney's purposes. The survey responses were extremely ambiguous as to the boundaries to be drawn for industrial districts except for general locations along the Willamette river. As a result, Cheney recommended that conferences be started "immediately" with industrial managers and property owners as to the best location for industrial districts (Cheney 1919b:75). No responses were referred to directly. Cheney did recommend, in this report, that obnoxious and odor producing factories be located in districts primarily along the Columbia River where the stock yards were already located. This recommendation was logical but in no way reflected the survey responses.

Cheney quoted directly from a small number of survey responses when arguing for the grouping of factories together and the creation of two classes of industrial districts: one for "ordinary" factories and one for "obnoxious and odor producing factories" (Cheney 1919b:78).

As a result of this survey, Cheney was able to claim that owners of factories in Portland were overwhelmingly in favor of districting industrial activities:

With so much direct evidence of the desires of the industries themselves, the City Planning Commission is ready to take up the question of the boundary locations of these zones (Cheney 1919b:81).

What the survey really indicated was: confusion over the concept of zoning on the part of business owners; a desire among some business owners to see similar or related activities within close proximity of each other; a reluctance to draw definite boundaries around districts; real concern about the danger of fire and other hazards; a desire for the separation of dangerous and obnoxious activities into districts away from other industrial activities.

Having obtained what he considered a mandate from factory managers and industrial property owners to zone, Cheney recommended that committees of property owners in the existing industrial areas be appointed to work with the planning commission to determine the boundaries of the industrial zones (Cheney 1919b:81).

The Uses and Heights of Existing Buildings Study. During the month of November 1918, much attention was given to completing an analysis of the uses and heights of buildings as well as the development of a "use" map (no longer extant) based on the Sanborn Fire Insurance Maps (Cheney 1918b:2). Included in *Report #2* to the Housing Committee were the preliminary findings of this study. Cheney determined that 82% of the city consisted of single-family residences: ". . . it is evident that they are entitled to most careful protection and consideration in all housing and zoning regulations" (Cheney 1918b:2). Other types of dwellings such as flats, apartment houses, tenements, lodging houses, clubs, and hotels made

up another 6% of the buildings in the city. The balance, 12%, were "classified" as business, public, or industrial (Cheney 1918b:2).

Nearly all of the buildings in the city, 97.4%, were 2 1/2 stories plus an attic, or less (Cheney 1918b:2). Portland was, in 1918, overwhelmingly residential and overwhelmingly low-rise. Cheney used this data to persuade and reassure the policy-makers that zoning would be necessary to preserve the city's character and Portland's conditions met the courts' legal requirements:

This shows the strong tendency in the residence neighborhood in the city to hold to a certain type of height of building which in most cases would be ruined or made undesirable by the intrusion of different types and inappropriate uses and heights of buildings. The courts now recognize that such natural tendencies of growth should be properly protected, stimulated and regulated under the police power by the adoption of municipal zone ordinances. To handle the housing, living and working situation in Portland, it is necessary to work out zoning regulation that will establish the use, height and bulk of all buildings hereafter to be erected, so that the natural existing tendencies may be protected and maintained reasonably in accord with the requirements of the city (Cheney 1918b:2).

The data on existing uses and heights of buildings together with the use map would provide legal evidence as to the tendencies of growth on which zones or district boundaries would be drawn (Cheney 1918b:2).

Cheney emphasized the importance of this data by reiterating in the report to the Housing Survey Committee the legal basis for zoning as he understood it:

The courts have held that the sole limitations on the use of the police power are reasonableness. Care must be taken that the regulations are not arbitrary and will actually preserve and carry on the natural tendencies of growth which provide

the greatest good for the greatest number of property owners. It is now our duty to prepare a preliminary form of zone ordinance based on this evidence . . . (Cheney 1918:2).

The Begemann Report. In his *Report #2* to the Housing Committee (1918b) Cheney included Lawrence A. Begemann's "Portland's Need of a Zoning System" (Begemann 1918). A research study conducted under the direction of a Professor Hastings at Reed College, its purpose was to give the scientific argument for the necessity of zoning. The explanation for the need to segregate uses—which was the study's focus—was primarily accomplished through the adoption of the notions of social Darwinism and the newly developing concepts of human ecology:

The development and growth of every city is guided and controlled, in part, at least, by economic forces. There are natural tendencies at work which seem to force buildings into different sections of the city according to the nature of their occupancy. The industries will tend to locate in the low level places where transportation facilities are best and the land fairly cheap. Stores and offices will locate around trading centers, i.e., where street car lines running from the various sections of the city meet. This forms the central trading centers thruout the city. A short distance from the stores and offices the flats and apartments will be found. People living in these classes of residences are those who do not care so much for private home life. Nearness to their place of work and street car service are the main factors in their minds when they choos[e] a residence location. Next to flats and apartments come single family dwellings. The people living in the residence districts are those desiring private home life with a yard and garden (Begemann 1918).

A study area, considered to be a "fairly typical district" which included trackage, waterfront, industry, retail stores, flats, apartments, and single-family residences, was selected for a detailed analysis (Begemann 1918) (Figure 3.1). The area, which included much of the central eastside of

Figure 3.1. The Begemann study area and bordering "elite" neighborhoods.

Portland, was bounded by the Willamette River to the west, Stark Street to the north, S.E. 52nd Street to the east, and Hawthorne Blvd. to the south.

According to Begemann, this portion of the city had already begun to organize itself into districts. From the waterfront to Union Avenue an abundance of factories, machine shops, and warehouses were located to take advantage of the proximity to the river, rail, and the level topography: "This district is therefore the natural and ideal place for the location of industry" (Begemann 1918:2). The natural location of the central trading district, as evidenced by the large number of shops in the area and the concentration of streetcar lines, was between Belmont and Stark Streets and Union Avenue to Sixth Street. There were also a number of local trading areas, indicated by clusters of shops at S.E. 15th and Hawthorne, S.E. 37th and Hawthorne, S.E. 35th through S.E. 37th along Belmont, and S.E. 45th and Belmont (Begemann 1918:2). From S.E. 12th to S.E. 20th was an area that tended "to show a preference for apartments and flats" (Begemann 1918:2). Beyond this "district" was an area of predominantly single-family residences (Begemann 1918:2).

These "districts"—which essentially conform to a concentric circle zonation scheme—would be "the working out of the development of this section of the city if left to natural economic forces" (Cheney 1918:2). However, individual whim sometimes deviated from these natural tendencies:

The trouble is that in actual practice there is a continual breaking over of one class of buildings into another class. Thus there is an eternal tearing down process and then a building over again. A zoning system is the proposed remedy for this evil (Cheney 1918:2).

Begemann's research question was "Should Portland adopt some sort of districting plan?" and he approached it from a very definite point of view couched in an uneasy combination of science and morality. Like others around the country, Begemann's thinking was also influenced by the New York experience. The reference to the "eternal tearing down process" and "building over" had been the essence of Manhattan's history (Lockwood 1972) until the adoption of zoning but not Portland's. Moreover, New Yorkers would have been envious of Portland's "congestion problem," however, it would be difficult to know that there was a difference judging from the Cheney and Begemann's rhetoric. The New York Commission on Building and Districts and Restrictions is cited by Begemann regarding Portland's need for height regulations.

Hastings and Begemann (1918:3) theorized that in order to decide whether or not Portland should adopt zoning, it would be necessary to determine whether buildings of different uses exerted influences over each other. Begemann (1918:3) proposed to examine the question of whether or not buildings of one kind of use entering a district of buildings of another kind of use tend to "break down" the district. Five types of "invasive" uses were examined: flats, apartments, stores, unobjectionable industries, and objectionable industries.

In terms of methodology, Begemann's approach was to measure the influence of non-residential uses by counting the number of lots utilized for dwellings, the invading use, and other uses within a very tight geographical framework. To determine whether or not a particular

non-residential use had invaded a residential neighborhood, the dates of construction were compared. For each of the identified non-residential or invasive uses, three levels of geographic influence or location were examined: the two lots "adjoining" the invader; lots in the half block in which the invader was situated as well as the half block immediately across the street; and lots in the half block directly to the rear of the invader. If a greater number of lots at a further distance were utilized as dwelling sites, it would indicate that the invader had exerted a negative influence upon residential building (Begemann 1918:5).

In each case, Begemann concluded that the non-residential use was the invader. It was determined that residences increased with distance from the non-residential use. Therefore, these uses exhibited a negative influence on residential building. It is informative to look closer, however. The half block to the rear proved to be problematic in nearly all of the classes of use, with the results running contrary to what was to be expected. Also, Begemann relied heavily on the difference between the uses of the adjacent lots to the non-residential building as opposed to those in the half block in which the building stands and the half block immediately across the street. It could be argued that although non-residential uses appear to have a negative influence on residential or single-family development, the influence as shown in report's tables (Appendix B) was not great considering the amount of single-family development within the same half block and immediately across the street.

The report is often contradictory. For example, after demonstrating in Tables V, VI, VII, and VIII (Appendix B) that apartments were invasive

and had a negative impact on single-family development in the study area, Begemann stated that "Apartments tend to break down a residence district although in the section covered [the study area] this has not been accomplished owing to the fact that apartments have not gained headway" (Begemann 1918:11-12). However, Begemann was determined to make the case that "invading classes not only tend to stop the erection of buildings but also tend to break down a residence district by inviting other invaders to enter" (Begemann 1918:23).

The "averages" in Table XXV (Appendix B) do indicate that there were more vacant lots adjacent to the invading buildings than in the half block in which the buildings are situated or in the half block across the street and the half block to the rear of the building. Not only are the differences in the average percentages of vacant lots small (63.6 adjacent, 60.6 facing and same half block, 58.2 rear) but the individual classes of invading uses sometimes tell a different story. For flats, the percentage of vacant lots is the same—64%—for the adjacent locations and the half block facing and half block containing the invading building. In the half block to the rear of the invading structure, the percentage of vacant lots is only one point less.

In the case of apartments, the percentage of vacant lots actually increases with distance (63% for adjacent, 72% for the half block facing and the same half block, 82% for the half block in the rear). For unobjectionable industries, the percentage of vacant lots increases from 75% for adjacent lots to 78% for lots in the half block facing and the same half block, but then decreases to 70% for lots in the half block to the rear.

The trend to fewer vacancies with distance from the invading use is clear for stores and objectionable industries. In the case of stores, vacancies decrease dramatically from 77% for adjacent lots to 51% for the facing half block and the same half block and then another strong decrease to 44% for lots in the half block to the rear. Adjacent lots are even more unpopular for objectionable industries where the percentage of vacant lots decreases 30 points from 69% to 39% for lots in the same and facing half block. There is another decrease to 31% for the lots to the rear. Evidently, the percentages for stores and objectionable industries skewed the averages.

In examining the influence of stores, Begemann indicates his social Darwinist perspective with perhaps a hint of bias:

The study of stores will also differ from that which we made on flats and apartments in that the stores divide themselves into two classes: those which make up a local trading center and those which are isolated from the local trading centers and [spring] up directly in the midst of dwellings as a bad weed will shoot up in the midst of a flower bed. . . (Begemann 1918:12).

The data and photographs (Figures 1.2, 1.3) in the report do support Begemann's contention that stores not located in trading centers tended to fail more than other stores Table IX (Appendix B), however, the "weed" analogy which suggested that they would spread and most likely thrive if not checked is not only contrary to the data presented but was intended to incite a response. And contrary to Cheney's rhetoric in *Zoning and City Planning for Portland, Oregon: Bulletin No. 1, June 1919*, which stated that "existing tendencies must be followed," (Cheney 1919:8) the proposed zoning map followed, instead, Begemann's recommendation that stores not located in trading centers—the "weeds"—be zoned out.

Based on his analysis, Begemann concluded the following:

It is evident that flats, apartments, stores and industries when they break into a residence section stop the development of the district as a dwelling district; they also draw buildings not residences into the residence portion; lastly, dwellings seem to move away from the district after it commences to break up as a residence section. . . . From the study of this particular district it is obvious that a zoning plan would have been beneficial. Nevertheless the district is a small part of Portland and the facts brought out in this study may or may not hold true for the entire city. It will therefore be necessary to continue this investigation before coming to the final conclusion of Portland's need for a districting plan (Begemann 1918:23-24).

Although this district contained all the classes of buildings, further study, Begemann recommended, should be made of sections of the city "which are more typical of each class of buildings" (Begemann 1918:24).

In particular, Begemann was interested in looking at industrial districts: "If possible it would be well to take a purely industrial section which had been invaded by dwellings and note the effects if any, of dwellings on the industrial districts" (Begemann 1918:24). This study was designed to omit from analysis the areas that were primarily industrial—along the river—and primarily commercial/industrial—from the river to S.E. 11th Street. The suggested study could have been conducted there, however, the outcome might not have been what Begemann expected. Judging from the tenor of this report and common sense, it would seem unlikely that residences would invade "purely" industrial districts, however, it would have been useful to provide a justification for excluding residences from these districts as Cheney would in his zoning ordinance.

THE CHENEY ORDINANCE

The *Zoning and City Planning for Portland, Oregon, Bulletin No. 1* (Cheney 1919a) was published in June, 1919, by the Portland Planning Commission as a public document. In it, Cheney put together all of his preliminary work to create a comprehensive and persuasive argument for the adoption of zoning as well as an outline of the proposed ordinance and the procedure for adoption. It includes the following sections:

- Steps necessary in zoning Portland.
- Reasons for a comprehensive zoning plan.
- General conditions of the city.
- Industrial growth and development.
- The housing problem in Portland.
- Determination of traffic arteries and major streets.

Appendices include:

- Population statistics.
- Families and rentals on east and west sides of the city.
- Tax rates.
- Count of neighborhood business firms and institutions.
- Wealth statistics.
- Text of the State Zoning Act (Chapter 300, Ore. Laws for 1919).
- Text of State Set-back Line Act (Chapter 275, Ore. Laws for 1919).
- Text of the ordinance establishing the City Planning Commission.
- References on Zoning and City Planning.

From the start, Cheney set the tone of his argument for zoning to the public by appealing to the financial interests of various constituencies:

The zoning of Portland is the first fundamental step, which carried out should effect a stabilization of property values that will provide greater security for mortgage loans, protect home neighborhoods as well as business investments and make possible a fairer and surer basis of assessment for the county assessor. The work of the City Planning Commission is important to the county as well as to the city, as zoning will ensure from depreciation the assessed values and sources of direct revenue for both the county and the city government (Cheney 1919a:iv).

Real estate investors and developers had been reluctant to endorse zoning in cities throughout the nation. If a zoning ordinance was to be adopted, it would be essential to bring these people on board. Cheney went on to assure them and unconvinced public officials of the advantages of zoning with the enhancement of the public coffers. The zoning ordinance which was being proposed conformed with the best of modern planning in that it would be based on science and not personal whim or esthetics alone. Moreover, he was careful to include the required references to the public health, safety, and welfare (Cheney 1919a:iv).

The small home owner, "who, after all forms the bulwark and strength of any city" was particularly singled out as a beneficiary of zoning through the expected tax savings (Cheney 1919a:iv). Given Cheney's view that no responsible planning could proceed without zoning, the bulletin announced that "Portland should be zoned now":

Portland is growing rapidly. While the war temporarily held up most building construction, and the high price of materials and labor may prevent much activity for a time, a great rush of building is sure to take place soon, in order to take up the lap and provide for the natural increase in population. The

city is as yet not as badly spoiled as it will be if the improper and unsuited use of buildings continues to be licensed by the issuance of building permits by the city government. It would seem obvious that a comprehensive zone ordinance for the whole city cannot be too soon worked out and adopted by the City (Cheney 1919a:16).

Not only would zoning benefit the small property owner, real estate investors, developers, and local government but it would enhance industrial districts:

There are many reasons why building zone regulations should be adopted in some form by every incorporated city. Chief among these is that there should be on the one hand a safe, unhampered place for industry, with the highest facilities of fire protection, transportation, hauling streets, etc., side by side with a protected home neighborhood where workers may live in health, comfort and contentment. These two requirements are of equal importance. The city's protection and regulation of them must be made for economic and social reasons (Cheney 1919a:11).

The segregation of uses, particularly home and industry, would create the best of possible worlds for them both. As if to emphasize that advantages of modern planning efforts over the less socially and economically informed City Beautiful approach Cheney assured the public that "Esthetic considerations do not enter in . . .," and yet "the orderly results of such regulated growth make unquestioned esthetic gain to the city" (Cheney 1919a:11).

According to Cheney, modern planning's use of a variety of social, economic, and spatial data was allowing planners to better understand the underlying forces behind the land use patterns of the city. It was important for the public to understand that districting, or zoning, was a natural and beneficial process guided by economic and social forces. Rather than

discouraging the market, zoning would encourage the economic processes already in motion:

The Use of Property Map [no longer extant] shows that Portland has naturally become divided into more or less clearly defined existing districts of different occupancy, use and type of building construction. . . Evidently, as similar surveys have developed in New York and other cities, there are strong social and economic forces working towards a natural segregation of buildings, according to type and use, and in general the greatest land values and rentals seem to be obtained where this segregation and uniformity are most complete. One purpose of districting regulations is to strengthen and supplement the natural trend towards such segregation (Cheney 1919a:16).

Why the need for such regulations if natural processes were already segregating the city into districts?

. . . building development in many parts of Portland has been very haphazard. The natural trend has not been strong enough to prevent the invasion of districts by harmful and inappropriate uses of buildings. Once a district has been thus invaded, rents and property values decline and it is difficult ever to reclaim the district to its more appropriate uses (Cheney 1919a:16).

Despite these natural processes, other forces (these are not described as "natural") were apparently also at work and powerfully so. Segregating forces were "good;" invasive forces were "evil," and contagious like a disease. There were "rightly" placed uses and "wrongly" placed uses. The most segregated zones, the purest zones were said to have the highest land values; those that had been made impure with a mixture of uses were believed to have depressed land values:

While we are not, as yet, in possession of sufficient data to accurately measure it, we can say for certainty that the destruction of property values throughout both the business

and residential sections, on account of these intrusions, has already reached very large proportions. It does not stop with the owners and areas immediately affected, but is reflected in depressed values throughout the city (Cheney 1919a:16).

Why the need for zoning when the newly adopted housing code would ensure that the unsafe and unhealthy conditions described in the Portland Housing Association report of 1918 would no longer be possible?

Another form of housing regulation is necessary to fully supplement the Housing Code, which is much more important to protect rents and property values. This is the adoption of a complete zoning scheme which will set aside residence neighborhoods of the city, safe from the sure deterioration which comes without exclusion of business and industrial buildings from home districts, and even of flat and apartment buildings from certain single family home sections (Cheney 1919a:17).

Cheney was always careful to frame his argument, which essentially rested on the benefits accrued to property owners, in terms of "the general public," a term that implied the inclusion of the non-propertied classes:

With over \$300,000,000 already invested in Portland real estate, a plan of city building is necessary that will tend to protect these property values, not only for individual owners, but for the community as a whole (Cheney 1919a:16).

In addition to use zoning, height regulations—particularly for apartments, hotels and lodging houses—were necessary to prevent congestion (Cheney 1919a:17). If single-family neighborhoods were to maintain their character, regulations—bulk regulations—should set aside "considerable areas," where not more than 50 percent of any lot could be built on (Cheney 1919a:17).

The reasons for adopting zoning were summarized in the bulletin as follows:

- To stabilize and protect property values and investments.
- To protect the maintenance of the home and of home neighborhoods.
- To offer a safe district in which industries may be located without protest and with every facility to do business.
- To prevent undue congestion of population.
- To ensure better sanitary conditions, providing minimum requirements for light and air.
- To simplify the problem of street traffic regulations.
- To make possible a sensible and more practical street paving program for the future.
- To render possible great economies in paving city streets through a decrease in the widths of roadways, where sizes and number of buildings are limited.
- To ensure the permanence of character of district when once established.
- To prevent the scattering and intrusion of any inappropriate and destructive uses of buildings which deteriorate and decrease property values.
- Finally, to make Portland a more orderly and convenient place in which to live and work.

(Cheney 1919a:18)

Proposed Building Zones

The Proposed Building Zones for the City of Portland, Oregon (as tentatively recommended by the neighborhood property owners meetings and the City Planning Commission October 25, 1919) was published by the

City Planning Commission as Bulletin No. 4, November 12, 1919. A preliminary zoning plan had been filed with the City Council on October 25th by the Planning Commission. The bulletin includes: names of the members of the advisory neighborhood property-owners' committees; the reasons for zoning; a definition of the various use districts; a detailed explanation for height limits; the legality of zoning; and a tentative draft of the proposed ordinance. Cheney was the consultant, and the language of much of the bulletin duplicates that of *Bulletin No. 1*.

The city was represented by 28 neighborhood advisory committees made up of four to seven property-owners with one exception, Laurelhurst, which had 11 members. Each of these advisory committees met once between February and October 1919 (Cheney 1919c:1-3). There was also a general industrial property owners' committee which had 13 members. The members of the committees, appointed by planning commission president, J. P. Newell, tended to be prominent, well connected citizens. I. F. Powers did double duty by participating as a member of the industrial property-owners' committee while at the same time acting as a planning commissioner. Professor Hudson B. Hastings, who had supervised the Begemann Report which strongly endorsed the strict separation of uses, was a member of the Sellwood-East Moreland neighborhood committee (Cheney 1919c:3), and a certain "Hudson L. Hastings" served on the Downtown neighborhood committee along with Henry L. Corbett, Realty Board member Robert H. Strong, and other powerful players in the downtown real estate market. Former U.S. District Attorney John McCourt was on the Irvington committee, and Frederick H.

Strong, secretary of the Ladd Estate Company, was appointed to the Ladd's Addition committee (Abbott 1983:81).

Building regulations and boundaries of the districts were to be determined by the committees taking into consideration, among other things, local conditions, the adequate provision of light and air, and the prevention of over-high buildings (Cheney 1919c:6). District lines were to be drawn down the center of blocks rather than the centers of streets to create a greater sense of homogeneity. And the districts could be of any suitable size to meet local conditions—as small as a single lot if necessary (Cheney 1919c:6). Furthermore, the committees were to keep in mind the mandate from the Oregon State Zoning Act which required that:

. . . reasonable consideration would be given, among other things, to the character of the district, its peculiar suitability for particular uses, the conservation of property values, and the direction of building in accord with a well-considered plan (quoted in Cheney 1919c:6).

Cheney emphasized that existing tendencies must be followed, however, he was ambiguous about developing "well-considered plan" which, in fact, was contrary to his rhetoric about the necessity of zoning being the first step in planning.

A description of the process was published in the August 29, 1919 edition of the *Sellwood Bee* :

First a committee is appointed to meet with representatives of the commission in each district and assist in marking out the bounds where residences, public garages, retail and wholesale business, undertaking parlors, hospitals, apartments, dry cleaning establishments etc., should be permitted to be built or established here in the future. . . . The committee met with Chas. H. Cheney, consultant of the Commission, in [committee member] Dr. Stearns' office Tuesday afternoon

and made recommendations as requested. . . . A widely advertised meeting was held in Sellwood School Tuesday evening where the report was submitted for approval and adopted. . . . A copy of the plans was left with the committee for the perusal of anyone interested. Written communications from residents or property owners of said district amending or objecting to the plans should be filed with the city auditor within ten days after the meeting. A public hearing will also be given by the council before passing the ordinance.

The speed at which the work was done indicates that there was little disagreement among the committee members. District boundaries were delineated and agreed upon by the property-owners' committee, a presentation was made to the neighborhood, and the neighborhood adopted the recommendations in the space of the afternoon and evening of one day.

The commission held one meeting per neighborhood with the exception of Albina which had two neighborhood meetings (Cheney 1919c:1-3), however, according to an article dated November 1, 1919 in the *Oregonian*, commission president, Newell, told members of the Portland Realty Board that the commission had held over 100 "conferences" with property owners in each of the city's 29 neighborhoods—presumably these were meetings of the property owners' committees. Representatives from three of the neighborhood committees reported to the Realty Board their perceptions of their neighborhood committees' responses to zoning and the task of identifying district boundaries. W. J. Hofmann from the Irvington neighborhood property owners' committee said that his group was especially concerned about protecting the neighborhood against the invasion of undesirable industries:

... the Irvington home owners were greatly in favor of the zoning plan, as the property was no longer protected by contracts, the building restrictions having expired about a year ago. The citizens there are strongly united to protect their district from invasion by unfavorable industries (*Oregonian* 1919:Nov. 1).

Attorney, A. F. Flegel, representing the Woodlawn neighborhood property owners' committee, was concerned about another sort of invasion:

Mr. Flegel told of the work of his committee in drawing up a plan for Woodlawn and expressed the opinion that the zoning system would develop greater community spirit and would do much to stimulate beautification of the various residence districts. He expressed the wish that the zoning plan might go a step further and protect residence districts from possible invasion by foreign or undesirable classes of people (*Oregonian* 1919:Nov. 1).

A. W. Lambert, member of the Realty Board who represented the central east side committee suggested that more work would be necessary to determine district boundaries in his neighborhood due to its changing nature:

Mr. Lambert told of the work which the central east side committee had done, but stated that further study would be necessary before a final plan would be ready. The central east side, he pointed out, is undergoing a transition, with the gradual encroachment of the business and industrial life upon the former residence sections (*Oregonian* 1919:Nov. 1).

Although a plan for the central east side was still unresolved, Newell boasted to Realty Board members:

... in every case these property owners have agreed on recommendations giving the boundaries of the business, residence and industrial districts which they desire for their protection (*Oregonian* 1919:Nov. 1).

In an article published in the *Oregonian* on November 23rd, Cheney related the sentiments of other property owner committee members. Suggesting that the concerns of this Sunnyside-Mount Tabor committee member was typical, Cheney quoted:

About 20 years ago there was platted Belmont Villa, in approximately 11 one-acre tracts, intended for individual home sites. The property lying upon the north and west slopes of Mount Tabor is very sightly and admirably suited for beautiful homes. Soon after the property was platted a buyer appeared through an agent and bought four of the tracts at the intersection of two prominent streets, lying entirely in front of the remaining unsold tracts. The assumption was that this sale was for the purpose of building homes, but there was built on the property a four-story frame hospital building, effectively shutting off from view the remainder of the property and greatly depreciating its value. Had the zoning system been in practice at that time it would not have been possible for a hospital to be built at this location without the consent of the owners of the adjoining property . . . Instead . . . for 20 years the very beautiful Mount Tabor district has struggled more or less successfully for the establishment of modern high-class homes against less desirable and less sightly sections of the city . . . (Cheney 1919f).

After receiving the approval from the property owners' committees as to the proposed district boundaries, Cheney put the individual plans together to develop a city-wide zoning plan which was then tentatively recommended by the committees and the planning commission. A series of public hearings were to be held to allow property-owners—ignoring the non-property-owning citizens—to make suggestions (Cheney 1919c:4), and a final report would then be made to the city council after which more public hearings would be held before the final passage of the ordinance.

In this public document, Cheney reiterated the reasons for zoning this time with the backing of the neighborhood committees. The benefits

accrued to property-owners were once again emphasized as was the flexibility of the proposed ordinance and the fact that it would only apply to new buildings and uses:

The plan provides for limiting new buildings and uses of property in the future to definitely established zones or districts for business, residence and industry, so that they will not conflict with each other to mutual disadvantage as at present. The proposal applies only to location of new buildings and uses, existing uses that happen to be in the wrong place not being affected. As readjustments will undoubtedly be necessary from time to time the Ordinance is drawn so as to be reasonably easy of amendment after a neighborhood meeting (Cheney 1919c:4).

From reports of property owners made to us in their neighborhood meetings, it is more than ever evident that the protection to be gained from the early passage of such a zone ordinance will be very great. Measured in dollars and cents, we estimate roughly that it will prevent depreciation of rents, property values, and taxable returns to the City, amounting to many hundreds of thousands of dollars in the next five years (Cheney 1919c:5).

The legality of zoning could not rest on the financial benefits to property-owners and government alone and so the obligatory statements about health, safety, and general welfare were included. Moreover, citizens would be reassured that "reasonable consideration" would be given to the character of their neighborhoods.

The Classifications

It was determined that three types of districts would have to be established. "Use" districts would be necessary to prevent the "scattering and intrusion of inappropriate and destructive uses of buildings and property" (Cheney 1919c:5). "Height" districts were necessary to maintain proper light and air and because it was found that skyscrapers tended to

breed vacant lots (Cheney 1919c:5). "Area" regulations would be necessary to prevent overcrowding and for "the protection of residence neighborhoods particularly" (Cheney 1919c:6).

Use Districts. According to the proposal, eight classes of use districts—two residence classes, two general business classes, two special business classes, and two kinds of industrial classes—were found to be "necessary" to deal with all of the "zoning problems" of Portland (Cheney 1919c:7).

Residence Districts—Class I: Single Family Dwellings Only.

Eighty-six per cent of all the buildings in Portland are single family dwellings. Evidently the interest of the city is to protect these great numbers of blocks of home owners from the invasion of flats and apartments, with their floater population, as well as from business and industrial buildings. Flats and apartments are needed in the city, but not scattered through every block to discourage and make less desirable the home of the most important social unit, which is a single family, living and developing by itself (Cheney 1919c:7).

A very large proportion of the outlying neighborhoods have asked to be classed for the present as single family home districts. . . . The property owners' committees for these home neighborhoods believe that they are entitled to continue this tendency of growth and to deep Portland a city of homes (Cheney 1919c:8).

The rationale for this classification, as stated here, not only depended on the tendencies of "natural forces" and the destructive outcomes of invasive uses but it relied on Portland's existing large proportion of single family residences. Portland should be "a city of homes" populated by "permanent" home-owners. And although it would be necessary to provide housing for the "floater" population, that must not

happen at the expense of "the most important social unit," the "single family, living and developing by itself" (Cheney 1919c:7).

Residence Districts—Class II: All Kinds of Dwellings—single family dwellings, flats, clubs, apartments, and hotels.

This is the general broad residence classification necessary for the older districts around the heart of the City, and for the traffic or carline streets in outlying sections, on which we find . . . that most of the flats and apartments build up. The renter class which occupy these dwellings have few children on whose account they are afraid of the traffic and cars, and they seem generally to prefer to be able to step from their door right on a street car going downtown (Cheney 1919c:8).

In Portland we find approximately one flat, apartment or hotel for each 18 single family dwellings—in other words, six per cent of the area is all that is naturally required for Class II uses (Cheney 1919c:8).

This Residence Class II districting should be applied, according to Cheney, to all of the "central west side" to the foot of the hills surrounding the downtown business area and to "an equally large area" on the east side surrounding "the large business area along the river," between Sullivan's Gulch and Hawthorne and east to 20th. This zoning should also be applied in Albina north to Fremont and to many blocks along traffic arterials in outlying areas (Cheney 1919c:8).

Business and Public Use District—Class III: Retail business, trades and professionals, theaters and railroad passenger stations, including residences of Class I and II.

Business and Public Use District—Class V: Retail business of Class III, plus public garages, wholesale business, or warehouse, feed or fuel business, dyeing and cleaning, undertaking parlors, oil supply

stations and railroad freight depots and sheds, including any residence, business or public use of Classes I, II, III, or IV.

These two classes combined corresponded to the single business class established in New York and elsewhere. Cheney had always advocated a relatively large number of classes in order to achieve a strict separation of uses. Here, his justification was as follows:

Retail owners . . . tell us that it hurts their business to have a public garage, an undertaking parlor, dyeing and cleaning works or other business of Class V next to them. The ordinary store, bank or office building, undoubtedly is damaged if this is permitted. Garages and Class V businesses generally seek the side streets and the lesser rents, but once in a while one gets into a strictly retail block and either destroys the rents on that side of the street, or else holds back a district properly belonging to retailers, who would be glad to pay the higher rents (Cheney 1919c:9).

The solution was to create two zones to cover "all the ordinary mercantile pursuits." Retailers would be protected against the intrusion of the more objectionable of these activities by establishing a few limited centers of Class III with adjoining blocks of Class V uses since garages and other Class V businesses were needed near these centers (Cheney 1919c:9).

Cheney pointed out in this document that the "Property Owners' Committee" made an effort, in drawing the boundaries for these zones, to include sufficient vacant property to accommodate new businesses for the next 10 or 15 years (Cheney 1919c:9).

Business and Public Use District—Class IV: Schools, public and semi-public buildings, churches, playgrounds, greenhouses, parks, cemeteries, including single family dwellings.

Business and Public Use District—Class VI: Hospitals, sanitariums, charitable institutions, orphanages, homes for aged, etc., including any kind of residence of Classes I or II.

Both of these classes of uses were considered to be problematic. Cheney observed:

These two special classes of Business and Public Use Districts are necessary to meet a widespread complaint, which we believe justified, that if these types of buildings are allowed to locate indiscriminately and without warning, they very often injure ten or more adjoining property owners to the benefit of the one. Even though they represent considerable groups in their public or semi-public capacity, it is certainly unfair to allow them to do any more damage to the desirability of a neighborhood, or to its property and rental values than is necessary (Cheney 1919c:10).

Whether parks, cemeteries, and playgrounds are included in this complaint is unclear. Again, the emphasis is economic for the benefit of property owners and the single-family home neighborhoods. Moreover, Cheney (1919c:10) stated that according to retail businessmen, public buildings, schools, churches and other Class IV uses "block the path of retail business," and that they were "deadheads" as far as customers were concerned. To prevent the "invasion" of Class IV uses into Class III territory, it was proposed that Class IV uses be prohibited from Class III business districts without an amendment of the ordinance (Cheney 1919c:10).

As for Class VI uses, their damage to adjacent property values was considered so great that the assessor routinely reduced the assessments for these parcels by "at least 10 percent" (Cheney 1919c:10):

This totals a loss in taxable returns to the city often of a much greater amount than the value of the new hospital, to say nothing the two or three times as much loss, at actual value, to the adjoining property owners. As we must have these institutions, the least damage is done by forming a few better located hospitals into permanent districts, and requiring new institutions of this kind to locate adjoining them, and the neighborhood committees have so recommended (Cheney 1919c:10).

Here, the public was not only reminded that zoning would remedy the ills of improperly placed uses but that the notion of creating strictly segregated districts was endorsed by their representatives—the neighborhood committees.

Industrial District—Class VII: Ordinary, not obnoxious factories, warehouses and industries, including any business use, but permitting no new residences of any kind.

Industrial District—Class VIII: Obnoxious and odor producing factories, including any kind of business use, but permitting no new residences of any kind.

There were two objectives in the establishment of industrial zones. The first was to concentrate industries geographically so that the city and industry could more efficiently make the improvements necessary to ensure the competitiveness of existing industrial concerns and attract new businesses to Portland. Such improvements would include: heavy hauling pavements; enlarged water mains; extra large sewers for industrial wastes; extra high pressure fire systems; unlimited spur tracks in sidewalks; elevated sidewalks for deliveries; and high tension power lines. Industrial districts should be accessible to transportation and/or accessible to a river (Cheney 1919c:10-11).

The second objective was to give industrialists a safe place in which to invest and know that their investments would not be "held back" or threatened by small residence owners (Cheney 1919c:11). This would be accomplished by prohibiting new construction of residences in the industrial zones. Just as industries invaded single-family residential districts, single-family residences tended to invade industrial districts. Apparently, the invasion process worked both ways. Cheney pointed out that although Portland, in its building code, had regulations requiring objectionable industries to locate in areas determined by City Council, these regulations weren't adequate:

Portland, like many other cities, already has regulations requiring slaughter houses, tanneries and similar industries to which there is much objection, to locate in sections specially arranged for by the City Council, after hearing. Yet only a few years after these institutions get well established there, we find them again surrounded by small home owners, who proceed to organize and sooner or later drive the industries out as nuisances (Cheney 1919c:11).

It was recommended that Class VIII industries be located on the windward side of the city and that the construction of any new single-family residences be prohibited from both Class VII and Class VIII zones (Cheney 1919c:11). It was further recommended by the Industrial Property Owners' Committee that Class VII zones be located on the west side of the river, from the Broadway Bridge north to Linnton, and south of Jefferson Street, east of Water Street and Macadam. A continuous industrial zone was proposed along the east side of the river along the low ground from Sellwood to the point of St. Johns, and along Columbia Boulevard generally north of the O.W. R. & N. line to Columbia Slough from St.

John's to East 42nd Street; also along Sullivan's Gulch from the Willamette to the "East City" limits. The committee also recommended that manufacturing be allowed in the central downtown and other business centers so long as it didn't occupy more than 25 percent of the floor space. This was to ensure that activities such as garment making, candy and food manufacturing, and wholesale businesses could continue in these areas (Cheney 1919c:11).

Non-conforming Uses. In any building or premises any lawful use existing at the time of the passage of the zoning ordinance would be allowed even if it didn't conform with the regulations of the use district. No existing building or premises designed, arranged, intended or devoted to a use not permitted by the ordinance would be allowed to be enlarged, extended, reconstructed or structurally altered unless the use was changed to a use permitted in the use district in which the building was located. Non-conforming uses would have to revert to allowable uses if the use were to be changed or if the building were destroyed by fire, explosion, act of God, or "act of the public enemy" to an extent of more than 75 percent of its assessed value (Cheney 1919c:26). Thus, with time, it was assumed that most non-conforming uses would be eliminated.

Proposed Height Classifications. The establishment of height regulations was intended to limit congestion, to secure proper light and air, and to make "a more even and fair distribution of the use of land" (Cheney 1919c:12). The "story" was chosen as the unit of measurement because it was considered to be "definite, as a measure of congestion" (Cheney 1919c:12). Cheney also recommended a maximum height limit in feet

measured to the ceiling line of the top story instead of the mean height of the roof which tended to encourage the building of flat roofs (Cheney 1919c:12).

Six classes of height districts were proposed: 2 1/2 half story, 3 story, 4 story, 6 story; 8 story, and 10 story.

Two and One Half Story Height Districts: According to Cheney, the 2 1/2 height limit was necessary for "home neighborhoods" to maintain their "natural tendencies of growth" (Cheney 1919c:12). In Portland, 97.4 percent of all buildings were 2 1/2 stories or less. Cheney's rationale went as follows:

The prospective home purchaser going down a block will appraise carefully the semblance of use of each building. It is not a matter of esthetics or beauty at all, but one affecting seriously the desirability of the neighborhood for homes in the mind of the purchaser. A 3 story limit is prejudicial to home buyers, and where a large proportion of owners, each with a house of 2 1/2 stories or less, desire to maintain this home character of the neighborhood, they are entitled to do so. Districts already invaded by a few two story and attic flats may even be reclaimed (as to desirability and values we believe) by establishing this 2 1/2 story limit, which requires a pitched roof like most residences and thus preserves the semblance of single family residence use (Cheney 1919c:12).

Three and Four Story Height Districts: Businesses or apartments in the outlying areas of the city were to be limited to three or four stories.

Families should not be permitted to pile up in apartments to a greater height for reasons of safety, convenience and health. Most property owners realize that two 3 story buildings are worth more to a neighborhood than one 5 story building, which generally sucks all the tenants out of neighboring lower buildings, while seldom paying any large returns of itself (Cheney 1919c:12).

Cheney did not substantiate this claim in the proposal, however, he stated that for these and "other reasons," the property owners' committees in all of the outlying districts of the city recommended a 3 story limit in "most cases" and a 4 story limit closer in (Cheney 1919c:12).

Six Story Height Districts: The property owners' committees recommended a 6 story limit for the central belt of apartments and small business centers surrounding downtown on the west side, as well as the central east side (Cheney 1919c:13). The arguments behind the height limitations had always centered around the New York experience which Cheney did here as well:

That it pays to keep your neighbor from building so high as to cast a perpetual shadow on your property is well shown by the case in New York City a few years ago when the Equitable Life Insurance Co. building, covering a whole block, was burned. The owners on the four sides opposite this block offered two and a quarter million dollars for a perpetual easement that would limit the new building to eight stories, so as not to cast a shadow on them—but the Equitable demanded two and a half millions and the deal failed. Since the construction of the new 40 story Equitable building the assessor says that the adjoining owners have asked and obtained substantial reductions of assessed value of their property on proof of loss of rents, due to lessened light and air (Cheney 1919c:13).

If it could happen in New York, it could happen in Portland. In fact, with mostly 60 foot- and a few 80 foot streets in Portland, "any building above six stories . . . is getting beyond the danger line" (Cheney 1919c:13). In other words, everything below 6 stories would be "dark, less healthy and less rentable" (Cheney 1919c:13).

- *Eight and 10 Story Height Districts:* Because of the lessons learned from New York and the fact that Portland was "not as yet badly spoiled" by

tall buildings, the Downtown Property Owners' Committee recommended a 10 story maximum height limit (120 feet) between the river and 100 feet west of Chapman Street, from 100 feet north of Burnside to 100 feet south of Yamhill (Cheney 1919c:13). Cheney included in Bulletin No. 4 the opinion of assessor Henry Reed which suggested that because there had been no height regulations in place prior to 1910, Portland was experiencing a large number of vacancies in downtown office buildings—in 1918, 552 out of 3,470 (16 percent) office rooms were vacant (Cheney 1919c:14). Reed suggested that an eight story limit should be set for downtown.

Area Regulations. Area regulations were essentially defined by the stated requirements of the use districts. Thus the percentage of the area of a lot which could be occupied by a structure or structures varied according to each use district. Residential districts permitted the smallest percentage of a given lot to be occupied by structures (Cheney 1919c:29).

Amendments to the Ordinance. It was recognized that as the city grew, changes would have to be made to the ordinance especially to accommodate an expected demand for an enlargement of the city's business, apartment, and industrial zones (Cheney 1919c:14). It was also recognized that an easily amendable ordinance could be important to win public approval. Cheney reassured the public that this would surely be the case:

No zoning plan can be rigid, but must be a growing, living thing, sufficiently easy of amendment to be promptly changed where any neighborhood growth demands it or injustice to property owners is found, but always on the principle that the

greatest good for the greatest number should prevail (Cheney 1919c:14).

Cheney, again, emphasized the importance of property owners. It is unclear what was meant by the greatest good for the greatest number—the greatest number of property owners?

A method of amendment was provided in the proposal that would be similar to the system of obtaining permits for certain uses as specified in Section 706 of the Building Code. Cheney recommended that where these uses were located in zones in which they would be legal, permits would no longer be necessary thereby eliminating most of the permit cases before Council. In the remaining cases where amendment of the ordinance would be necessary "a reasonably quick procedure has been recommended which should grant every justifiable change and permit without any unnecessary delay" (Cheney 1919c:14). If property owners were hesitant to support the ordinance because they believed that their property had been wrongly zoned, Cheney wanted them to know that amendments would be quick, easy, and certain.

THE 1924 ORDINANCE

On November 2nd, 1920, after a rather contentious political debate (Appendix C) conducted primarily in the press by the city's realtors against Cheney's supporters, Cheney's zoning proposal went to Portland's citizens for a vote. This was a different process from the one Cheney had expected—a vote by the city council only. The code was narrowly defeated by 219 votes—40% of registered voters turned out with 30,631 voting for and 30,850 voting against the ordinance (Abbott 1983:85; MacColl 1979:300). At the

time of the defeat of Cheney's ordinance, only New York City and St. Louis had adopted comprehensive zoning codes.

It would take four years after the defeat of the Cheney ordinance before a zoning ordinance would be approved by Portland's voters. During those four years, the city was having to rely on Sections 706 and 707 of the Building Code to control the development of various districts. As the city's growth increased during the early 1920s, this process seemed to be increasingly awkward and cumbersome even to many of those who had rejected the 1919 ordinance.

The second effort at zoning was spear-headed by the city's realtors. One year after Cheney's proposal was defeated in the polls, the Realty Board suggested to the city council that a joint committee of the Planning Commission and the Realty Board develop a new zoning code for the city (LTK 1975:4). The joint committee was made up of seven members from the Realty Board and six from the Planning Commission—three of which were, at this time, also real estate agents (MacColl 1979:301). Realtor, Fred W. German, who had been one of zoning's loudest critics became chairman of the committee.

No outside expertise was used in this effort although Cheney had laid the groundwork. The text of the ordinance was written by H. E. Plummer, head of the Bureau of Buildings and planning commissioner. The zoning map was prepared by C. A. McClure, the first staff head of the planning commission and was field-checked by subcommittees of the Joint Committee (LTK 1975:4). There were 13 subcommittees each with at least

two members familiar with the area: eight covering the east side and five covered the west side (LTK 1975:4).

The goal of this second zoning effort, sometimes referred to as the "realtors' code" (MacColl 1979:301), was to eliminate the complexity of the 1919 ordinance both in terms of the zones themselves and the process of amendment (*Oregonian* 1923:August 5). Height and area districts were done away with completely, and instead of eight use classifications, there were four:

Unlike the former zoning ordinance which the voters of the city refused to indorse, the proposed plan is extremely simple. The districts agreed upon are defined in the ordinance, a means is provided to invoke local option to overcome any of the regulations, and a board of appeal is provided, such board to interpret the various sections of the ordinance in the event of a dispute (*Oregonian* 1923:August 5).

An important element in this ordinance was the "local option" provision. Each class had its own local option provision which expanded the number of permitted uses in a district with the consent of a certain percentage of property owners within a specified area surrounding a given property. These local option uses were specified in the ordinance. Thus a business could be allowed in a residential district under the local option provision so long as it met the ordinance's requirements.

Class I residential: covering 18.7% (City Planning Commission 1924:3) of the city's land area—essentially all of Portland's elite neighborhoods—was restricted to single-family residences. A private garage, a pergola, a greenhouse for private use, and a "summer house" per residence was also permitted as were in-home offices for physicians, surgeons, and dentists (*Oregonian* 1923:August 5). The "local option"

provision for this class required the consent of 40 percent of property owners within 200 feet of a property contemplated for business use (*Oregonian* 1923:August 5). Billboards were prohibited in Class 1 (*Oregonian* 1923:August 5).

Class II residential: covered approximately 43.5% of the city (City Planning Commission 1924:3) and permitted single-family dwellings, two-family residences, flats, apartment buildings, boarding houses, hotels, multiple dwellings, parks, playgrounds, truck gardens, and farms (*Oregonian* 1923:August 5; *Daily Record-Abstract* 1924). Under the local option provisions the following uses and "occupancies" could be permitted: "baby homes;" billboards; boys' and girls' aid homes; churches; convents; public garages; greenhouses; hospitals (except for the insane or drug users); libraries; monasteries; old people's homes; orphanages, parish houses; post offices; railroad stations; refuge homes, sanitariums; signboards; undertaking parlors; and similar uses (*Oregonian* 1923:August 5). Class II also provided for special temporary residence districts which conformed with all Class II restrictions except that it permitted the construction of "temporary" dwellings to be allowed for a period of two years under certain restrictions (*Daily Record-Abstract* 1924).

Class III business districts: covering 23.6% of the city's land (City Planning Commission 1924:3), permitted commercial and light industries. Permitted uses included in broad terms "general assemblage" buildings, general business buildings, public buildings, and residential buildings of all types (*Daily Record-Abstract* 1924). Local option uses included: metal products industries; miscellaneous heavy industrial uses; fuel yards;

lumber mills or yards; petroleum products storage; raw hides warehouses; sauerkraut, vinegar, or yeast manufacturing plants; and other similar uses (*Daily Record-Abstract* 1924). Hazardous uses were prohibited from these districts.

The remaining 9.6% of the city (the Planning Commission included in its percentages 4.6 percent of water area in the city) was zoned Class IV or "unrestricted" (City Planning Commission 1924:3). These were areas essentially designated for hazardous activities.

The business of zoning was made a great deal easier with only four zone classes. The combination of use, height, and area districts of Cheney's ordinance could have theoretically produced as many as 64 different zones (Abbott 1983:87). Moreover, the Joint Committee agreed that the "basic rule" in outlining zones would be that all streets on which main or through streetcar lines were located would be zoned business; all other locations would be zones as they were (LTK 1975:4). Cheney, too, indicated that businesses "naturally tended" to locate along streetcar lines; he also emphasized the importance of following "existing tendencies." Cheney's premise had been to base his zones on natural law; the realtor's merely wanted an ordinance that was simple, flexible, and easy to amend. Little thought was given to any theoretical foundation to their districting, although the fundamental notion of separating uses was continued. It was this sort of ordinance that the voters could comprehend.

Compared to the 1919 debate (Appendix C), there was little public discussion. The *Oregonian* and the *Journal* published the proposed zoning map and ordinance on August 5, 1923. Also, in August 1923, the Joint

Committee began a series of public meetings, visiting various community clubs equipped with map and ordinance. The committee's policy was that the community "always" knew what was best. Requests for changes to the map were always granted so long as the requests were backed up by a petition of the district, action of the community club, or some other action indicating a majority of the property owners in the affected district (LTK 1975:5).

The amendment process continued into December 1923. A report was made by the Planning Commission to the city council in February 1924. The joint committee continued to consider requests for amendments and in May 1924 the city council requested an opinion of the City Attorney as to the validity of the ordinance if passed by the council or by a vote of the people. Later that month, the City Attorney gave the opinion that it made no difference whether the ordinance was adopted by the council or the people, however, in his opinion, the constitutionality of the ordinance could still be questioned on other grounds. On September 3rd, the council passed the ordinance unanimously. On September 24th, the council passed it again due to errors in the first draft and passed a resolution to refer the ordinance to a vote of the people (LTK 1975:5). On November 4, 1924, the "realtors' ordinance" was passed by the voters of Portland— 41,897 voting "for," and 28,182 "against" (City Planning Commission 1924:1).

In its annual report, the planning commission claimed that the approval by the city council and sanction by the public of the zoning ordinance was "outstanding," "the most beneficial work" rendered by the commission during the year (City Planning Commission 1924:1). Petitions

for zone changes began again the day after the election. However, the commission wasn't especially concerned:

Indications are that for the first few months of the coming year there will be a considerable number of petitions for change of districts but it is expected that, as has been the experience of other cities, after the first six or eight months of zoning, the majority of changes will be made and after that time there will be very few requests for changes (City Planning Commission 1924:4).

CHAPTER IV

MAP ANALYSES

METHODOLOGY

The study area for the map analyses in this study was chosen to correspond with that of Begemann (Figure 3.1). It is an area spanning west to east from the Willamette River—across the river from the old city center—to the outer reaches of the then developed city at S.E. 52nd. From north to south, it roughly parallels the extent of the downtown core from S.E. Stark to S.E. Hawthorne Boulevard. This area was chosen by Begemann because it included a variety of uses—essentially a cross-section of the city—and a history of change that was necessary to test his hypothesis. It was also important to this study that there were no "elite" neighborhoods within the study area—for example, Laurelhurst just to the north—with deed restrictions so that the influence of the market could be clearly seen.

In looking at pre-zoning land use trends and evidence of invasion of flats, apartments, stores, and industries into single-family residential neighborhoods (Map Study #1), the Sanborn Fire Insurance Maps for 1909 and 1924 were used. Begemann and Cheney both claim to have used the Sanborn maps to determine land use. Since no other Sanborn maps exist for this time period, it is assumed that they must have used the 1909 maps presumably updated with observations from the field. Because these maps

include both the use and footprints of all existing structures (Figure 4.1), they are ideal for tracking and ascertaining patterns in the location and number of various uses over time. Moreover, these maps reveal the scale of the individual structures in terms of height and bulk. Cheney claimed that single-family neighborhoods were rapidly being invaded by other uses. He also claimed that residential uses should be prohibited from industrial zones because they had a tendency to invade such zones. Simple comparisons were made between the 1909 and 1924 maps to test these theories.

Why zone boundaries were drawn where they were drawn is an important part of this study. In Map Study #2, the Cheney proposal and the 1924 ordinance are compared to each other and to the actual uses of land in the study area. Both Cheney and the realtors claimed to have based the location of their zones on the existing land uses and yet these two ordinances used different categories of land use and drew their land use boundaries differently on the same urban fabric (Figures 4.2, 4.3). Map Study #2 overlays the zone boundaries of each ordinance over the existing uses as indicated by the 1924 Sanborn maps (Figures 4.4, 4.5). The Sanborn company only published maps for this area in 1909 and 1924. Because there had been rapid growth in Portland after the war, it was decided to use the 1924 maps.

The two map studies are based upon the evidence provided by the Sanborn Fire Insurance Maps. They were chosen because Cheney and Begemann used them extensively in their analyses and because they are the best record available of the spatial relationships between land uses. (It

Figure 4.1. Sanborn Fire Insurance Map #733. Portland, Oregon (1924).

Figure 4.2. The Cheney proposal zone boundaries in the study area.

Figure 4.3. The 1924 Ordinance zone boundaries in the study area.

Figure 4.4. A Cheney proposal zone overlay on Sanborn Map #733 (1924).

Figure 4.5. A 1924 Ordinance zone overlay on Sanborn Map #733 (1924).

is extremely unfortunate that the "existing use" maps developed by Cheney and Begemann, according to officials at the City Archives, are no longer in existence.) Since zoning was not adopted in Portland until November of 1924, the 1924 Sanborn maps reflect a landscape unaffected by zoning.

Using these maps presented many difficulties. Original Sanborn maps for this time period are only available at the Oregon Historical Society for a substantial fee. In order to study them fully, it became necessary to obtain copies of the maps from the available microfilm. Unfortunately, color coding on the original maps sometimes translates into unreadable symbols when translated into black and white microfilm (Figure 4.1). Moreover, because of the very large scale employed by the Sanborn Company, a great many maps were necessary—approximately 90 between the two years—to survey the study area. As a result, four copies of the microfilm had to be made to capture the total area on each map. These were then taped together and, in the case of the 1924 maps, reduced using a color copy machine.

Maps of the two ordinances were used for the comparison between the two ordinances as they relate to actual uses. Cheney published a large scale map, "Diagram of Use Districts—Building Zone Plan of Portland, Feb. 7th 1920," which is available at both the Oregon Historical Society and the City of Portland Archives. Finding a good map of the 1924 ordinance proved more difficult. Neither the city archivist nor the librarians at the Oregon Historical Society were able to locate an official map. Proposed district boundaries were published in the *Oregonian* and the *Journal* on

August 5, 1923 and the *Daily Record-Abstract* published a series of maps on the eve of the election on November 3, 1924. The *Oregonian* and *Journal* articles are readily available and the City Archives had a copy of the *Daily Record-Abstract*. These, were checked against each other as well as against a 1927 Planning Bureau zoning map to produce some missing pieces of information. The 1927 zoning map was used, with the zoning symbolization removed, as the base map for the figures in this study of the overall ordinances.

Map Study #1: Methodological Issues

The first map study is a comparison of the actual land uses and changes in land uses between 1909 and 1924. The purpose of this comparison is to verify and to gain some understanding of the invasion and succession processes which Begemann suggested were occurring. This is not intended to be a detailed analysis but rather an overview of changes in use to supplement the discussion of Begemann's study which Cheney suggested justified his approach to establishing district boundaries.

Although Begemann's study was six years earlier than the 1924 map, if his assumptions were correct, these processes in an unregulated environment should have made the reality of those assumptions even more emphatic. The number of buildings, their use, changes in the number of buildings between 1909 and 1924, and changes in their use was tracked west to east—from the source of undesirable uses (the industrial area) to the single-family residential area—by block throughout the study area.

In general, the uses as defined by Sanborn are accepted for both map studies, however, "housekeeping rooms" and "boarding houses" are

considered "flats." "Buildings" are counted as: one structure equals one building. Therefore, one structure that contains multiple dwelling units such as a "flat" building with several units or an apartment building is counted as one building. This is also true in the case of "dwellings." Sanborn identified a small number of what appear to be duplex structures as "dwellings" as opposed to "flats." The Sanborn definition is accepted but such a structure is only counted as one dwelling building. The case of "shops" and manufacturing and industrial facilities proved more difficult, in part because of the problem of scale. In the case of shops, most often one building contained several individual shops and those structures could be large. For the purposes of this study, shops were counted by individual address rather distinct structure. Manufacturing and industrial buildings (gas stations were included in this category) ranged in size from the size of the average dwelling to one quarter of a block. The problem of counting these buildings was avoided to a great extent because both map studies focus on the area of greatest disagreement between the ordinances east of S.E. 12th where few such buildings were located. Manufacturing and industrial buildings were counted as: one structure equals one building.

Map Study #2: Methodological Issues

The second map study compares the locations of existing uses against the district locations or zones for each of the ordinances. Clearly, it would have been most advantageous to have been able to use the same unit of comparison such as land area. Given the peculiarities of the pre-zoned landscape, however, this would be difficult and misleading. Before zoning, there were no minimum lot sizes. The Sanborn maps indicate

that people often squeezed in houses wherever they could (Figure 4.1). There are lines on the Sanborn maps that appear to be remnant lot lines from earlier editions (Figure 4.1). However, there is no way to be certain when or if these were actual lot lines. Moreover, often there are several dwellings on what may once have been one lot or one dwelling at the edge of what looks like several vacant lots (Figure 4.1). As a result, it is extremely difficult to tell which land was vacant. Furthermore, any use could have been built on the "vacant" land. Cheney, apparently, saw this as a problem as well. In order to determine "existing tendencies" including the percentages of various uses city-wide, Cheney chose to count the number of buildings shown on what must have been the 1909 Sanborn maps and made adjustments to account for new construction (Cheney 1919c:7). From these counts, Cheney determined the percentage of land that should be allocated to each use (Cheney 1919c:8).

Cheney's methodology is mirrored in this study. The proportion of actual uses has been determined by actual counts of the buildings indicated on the 1924 Sanborn maps. The proportion of uses for both ordinances was determined by the percentage of land taken by each use per block. This approach was used because measuring each block would have been extremely time consuming given the number of maps examined. This method produced estimates rather than precise areas. Although there was some variation in the block sizes, this was most often because streets had not yet been put through (Figure 4.1). This was taken into account. Blocks were subdivided down to 1/16 when necessary. The ordinance maps, however, did not require any greater precision.

Although this approach does, to a degree, amount to comparing apples and oranges—numbers of buildings and land area—it can be said that because, in general, there was uniformity in the scale of buildings within each use category and because of the built-up nature of the study area leaving relatively few obviously under-utilized lots by 1924, a valid connection can be made between the actual uses and the land area proposed for them. Thus, the percentage of buildings of various land uses was calculated and compared to the proportion of the land use classes by block area for each ordinance. Furthermore, a count of buildings by use was made for each land use class for both ordinances. This was done to measure how closely each ordinance reflected existing land uses. In other words, a class which had a small proportion of non-conforming uses could be said to closely reflect the uses actually present.

Analysis was made possible by the creation of a series of transparent overlays with the ordinances' district areas and boundaries drawn on them (Figures 4.4, 4.5).

MAP STUDY #1: EVIDENCE OF EXISTING USES AND TRENDS FROM THE 1909 AND 1924 SANBORN MAPS

Cheney's argument for the necessity of zoning Portland was essentially economic, grounded in social Darwinism and the concepts that Park called, "human ecology." Cheney asserted that the invasion of "inappropriate" uses into residential and industrial areas was a very real threat to economic viability of the city. Once invasion took hold, the process of succession would occur thereby decreasing and, in some cases, destroying the economic value of single-family and industrial areas. The most valuable properties were those located in the most homogeneous

districts. "Natural" segregation was occurring as evidenced by the various industrial, commercial, and residential areas in town. However, the forces responsible for these tendencies were not strong enough to prevent the process of invasion from damaging much of the city. Cheney believed that a well designed zoning ordinance was the only effective way to prevent the invasion of inappropriate uses into relatively homogeneous districts.

Cheney used Begemann's 1918 invasion study to support these assertions. What follows is an examination of the actual changes in use in Begemann's study area based on the 1909 and 1924 Sanborn Fire Insurance maps. Begemann stated that he relied heavily on the Sanborn maps for his analysis—he must have used the 1909 maps supplemented by field checks. As there are no maps between 1909 and 1924, the 1924 maps were used. Zoning was not adopted until the end of 1924, therefore this was still an essentially unregulated cityscape. If Begemann's conclusions were correct, evidence of invasion and succession would have been even greater in 1924 than in 1918.

A comparison of the Sanborn 1909 and 1924 maps for the study area indicates the following:

- The area from the river to Union, because of its proximity to the river and the rail along S.E. 1st and S.E. 2nd, was dominated by industrial activities in 1909. Between 1909 and 1924, many new industries built on the vacant lots in this area.
- A commercial district was well established along Union and Grand in 1909. By 1924, several new stores were located along these streets reinforcing this strip as a commercial "center."

- There is no evidence that there was any residential invasion between 1909 and 1924 in the largely industrial and commercial area from the river to S.E. 7th. Cheney had argued that it would be necessary to prohibit residential uses in industrial zones because industry needed to be protected from the inevitable invasion of residences.
- There is evidence, by 1924, of an invasion of industrial uses from Grand to S.E. 11th. This area had a variety of uses in 1909 including many single-family dwellings. However, the area was sparsely populated in its southern half because of what appears to be low lying marsh land and a pond which included what was called "Hawthorne Park" between S.E. 9th and S.E. 12th, S.E. Salmon and S.E. Hawthorne. This area appears to have been filled and subdivided by 1924. It is clear that by 1924, there had been a net loss of single-family residences and a net gain of industrial activities. Much of the loss of single-family residences was a result of the conversion of residences to flats or rooming houses rather than new construction of flats. Where development exists, south of Belmont, it is almost entirely industrial. North of Belmont is largely residential.
- In the area just east of the commercial zone along Grand (east side of S.E. 6th) to S.E. 12th only two new single-family dwellings were built between 1909 and 1924 whereas 19 single-family houses were converted to flats or rooming houses, five new buildings used as flats were built, and 10 apartment buildings were constructed.

- In 1909, most commercial activities were located along or were within a half block of the major east/ west arterials and the commuter rail lines especially in clusters along Belmont and Hawthorne but also Morrison and Stark. A small number of shops were dispersed throughout the study area. None of these appear to have been torn down or converted to another use, however, and only one "new" shop built between 1909 and 1924 is located on a "residential" street (Map 941, the southeast corner to Salmon and 47th). Cheney believed that the correct location for shops was along major arterials and commuter rail lines. Although he believed that wrongly located uses would fail, he also held that these uses had a tendency to invade residential districts. Zoning was necessary because economic forces alone would not be strong enough to prevent such an invasion. However, in the 15 years between 1909 and 1924, economic forces appear to have been adequate to prevent the invasion of commercial uses within the residential fabric.
- The area between S.E. 12th and S.E. 23rd appears to have experienced the most dramatic change with respect to land use. Although it remained almost entirely residential—except along the major arterials—with the number of residential structures increasing between 1909 and 1924, the number of single-family residences was actually higher in the area between S.E. 6th and S.E. 20th in 1909 than in 1924 (Figure 4.6). This happened for two reasons: an extraordinarily large number of conversions of single-family residences to flats or rooming houses (especially between S.E. 12th

Figure 4.6. Single-family dwellings in 1909 and 1924 aggregated by Sanborn maps.
Source: Sanborn Fire Insurance Maps, Portland, Oregon (1909 and 1924).

and S.E. 20th; and the construction of new units (Figure 4.7). Cheney and Begemann had argued that the danger of the invasion of unwanted uses in a single-family residential neighborhood was, among other things, that more undesirable uses would follow. This area most clearly shows evidence of invasion, however, what happened here, as well as the remainder of the study area where flats were developed, was not as much an invasion by the construction of structures intended for an undesirable use as a change in use of previously standing structures. One of the results of this was that the scale of the individual structures remained at the same single-family house level. Even new flat development was at the same scale as the surrounding single-family residences. It should be said here that it is impossible to tell from these maps whether these new "flats" were constructed sometime between 1909 and 1924 as single-family residences with subsequent conversion to flats or whether they were at the time of construction intended to be flats. As a result, the number of conversions in this analysis is probably undercounted.

Furthermore, because there is no way of knowing from these maps when the conversions were made or when the new flats were constructed, beyond the dates 1909 and 1924, it is difficult to know precisely how they affected the location of new single-family dwellings. However, after 15 years of development, the area was still largely single-family. Even the area between S.E. 13th and S.E. 21st, arguably the most invaded section of the study area, was 81%

INVASION OF FLATS (1924)

Figure 4.7. Composition of flats in 1924.
Source: Sanborn Fire Insurance Maps, Portland, Oregon (1909 and 1924).

single-family in 1924. The location of flats appears to be sometimes clustered; sometimes not (Appendix D). At times it looks as if an owner, desiring a new house, may have built one adjacent to the old one and then rented out the old house as flats or rooms. There appears to be no relationship between the location of vacant lots to the location of flats as might be expected when so many flat buildings were conversions and not new construction. Even at the eastern third of the study area, from S.E. 39th to S.E. 52nd where proportionally there was more new single-family development than anywhere else, more of the flats were conversions than newly built units (12 conversions, 8 new flats). The invasion process may have been different from the one described by Begemann. "Invasion" may, indeed, be the wrong analogy.

- There is a clear pattern of changing land use from west (the city's center) to east—much as Park was documenting in Chicago at the time. Industrial uses were located between the central business district (CBD) and the area of worker housing (flats) in this case because of the accessibility to the river. An inner area of flats gives way to an area of predominately single family residences. It is important to note, however, that even the area where most flats were located was predominantly single-family (Figure 4.8). It should be noted that the dip in the graph in figure is due to the presence of the Lone Fir Cemetery.
- Unlike flats, nearly all of the apartment buildings in 1924 were new and clearly designed for that purpose (larger in scale and sometimes

Figure 4.8. Composition of residential structures in the study area (Grand to S.E. 52nd) in 1924. Source: Sanborn Fire Insurance Maps, Portland, Oregon (1909 and 1924).

built of fireproof material such as brick). Perhaps because of the larger investment required, their location, in general, appears to be purposeful—lots were bought with the intention of building apartments. In the entire study area, 37 new apartment buildings were built in fifteen years, two residences were converted to apartments, and five apartment buildings remained from 1909. Eleven were located between S.E. 6th and S.E. 12th in the highly mixed-use area of manufacturing, commercial, single-family houses, and flats. Twelve more were located between S.E. 12th and S.E. 23rd. Sixteen apartment buildings were located on the major thoroughfares of Stark, Belmont, Morrison, or Hawthorne. The scale of these structures is still relatively modest; nearly all of them are three stories or less in height. Compare this to Cheney's height districts for this area (Figure 4.9).

MAP STUDY #2: ORDINANCE BOUNDARIES AND ACTUAL USES

. . . Portland has naturally become divided into more or less clearly defined existing districts of different occupancy, use and type of building construction. . . . One purpose of districting regulations is to strengthen and supplement the natural trend towards such segregation (Cheney 1919a:16).

In determining boundaries, 'reasonable consideration should be given, among other things, to the character of the district, its peculiar suitability for particular uses, the conservation of property values, and the direction of building in accord with a well-considered plan.' (From the Oregon State Zoning Act quoted in Cheney 1919c:6).

Districts should be of any size advisable to meet local conditions—as small as a single lot in some cases (Cheney 1919c:6).

Figure 4.9. Cheney's proposed height regulations for the study area.
Source: "Diagram of Use Districts—Building Zone Plan of Portland, Feb. 7th 1920."

Unlike the former zoning ordinance [Cheney proposal], which the voters of the city refused to indorse, the proposed plan [1924 ordinance] is extremely simple. The districts agreed upon are defined in the ordinance, a means is provided to invoke local option to overcome any of the regulations, and a board of appeal is provided, such board to interpret the various sections of the ordinance in the event of a dispute (*Oregonian*: August 5, 1923).

'The basic rule agreed upon when outlining the various zones [1924 ordinance] was that all streets, upon which main or through street car lines were located, were zoned business. All other locations were zoned as existing conditions indicated.' (Quoted from the City Planning Commission's Secretary's notes, 1923, in LTK 1975:4).

The legal history of zoning in the United States has been largely written in the suburbs (Weaver and Babcock 1979:13). It is, therefore, easy to forget that zoning was born in the city to address city problems. The two ordinances examined in this study were designed for a fast-growing but largely built-up, relatively tightly bounded city. Instead of being able to draw district boundaries on an empty suburban slate, the drafters of these ordinances were forced to impose use, and in Cheney's case, use and height districts, on a predominantly developed landscape. It should be kept in mind, however, that Portland, unlike its east coast counterparts, was predominantly a city of single-family dwellings; its morphology only resembled those cities in its downtown core. The morphology of the east side of Portland was more suburban than urban in this sense.

From Cheney's point of view, it was the built environment that required zoning most. Zoning was necessary to protect development when it coincided with the land use segregation that he believed was the outcome of natural forces, and to prohibit further invasion of

inappropriate uses into naturally homogeneous areas (Cheney 1919a:16). Underlying Cheney's arguments, there was always the assumption that what he defined as "natural" was "good" and "right." Single-family districts must be protected; mixed residential and commercial use districts were to be prevented:

Flats and apartments are needed in the city, but not scattered through every block to discourage and make less desirable the home of the most important social unit, which is a single family, living and developing by itself (Cheney 1919c:7).

However, Cheney's argument was inherently contradictory. Both land use segregation and invasion were the result of the unregulated market and social forces—in other words, natural forces. Cheney never acknowledged this fundamental flaw to his position and proceeded unencumbered by it.

Cheney devoted a great deal of effort to the study of land use in Portland. Using the Sanborn Fire Insurance Maps and observations in the field, he created his own Use of Property Map (no longer extant) in order to more clearly identify the use districts which economic and social forces appeared to be creating. According to Cheney's rhetoric, it would be these "naturally occurring districts" that he would reinforce and more clearly define with zoning. Cheney's approach was detailed and highly compartmentalized. Cheney claimed that his cues were taken from what actually existed; therefore the size of a district would be a direct response to "local conditions" and could be as small as a single lot if necessary (Cheney 1919c:6).

The 1924 ordinance, in response to the complexity of Cheney's ordinance with its eight use districts and six height districts, was designed

to be simple, easily understood, and flexible. In contrast to Cheney's gradations of classes for commercial, manufacturing, and industrial uses as well as his separate public use zones, height districts, and area regulations, the realtors' ordinance consisted of four use classes only. Two of these classes were residential, comparable to Cheney's two residential classes; the third class allowed essentially all uses, except noxious industries, but it was intended primarily for commercial and manufacturing activities; the fourth class was unrestricted. In order to achieve Cheney's goal of defining highly segregated use districts, a larger number of use districts was required. With half the number of use districts and no height or area districts, the realtors' ordinance created the possibility for a certain amount of mixing of uses, especially commercial, manufacturing, and industrial uses.

The "1924" approach to locating district boundaries was simple as well: all streets where main or through streetcar lines were situated were zoned for business (LTK 1975:4); all other locations were zoned "as existing conditions indicated" (LTK 1975:4). In other words, it made good business sense to the realtors to encourage businesses to locate where public transportation was most accessible. Other than that, existing uses could pretty much stay where they were.

Although Cheney stated that, on the whole, the city was already organized into districts and implied that those districts would be verified in his proposal, Cheney's ordinance was at its core a means for correction and reform. The underlying intent of the 1924 ordinance was less clearly articulated. The real estate industry in Portland had been instrumental in

defeating Cheney's ordinance. Despite Cheney's arguments in support of natural economic tendencies, the real estate industry viewed zoning as an interference with economic competition. To Portland realtors, zoning was an instrument developed by and for the elite, notably outside experts like Cheney, to ensure their dominance in the market. However, by 1921, realtors in Portland began to realize that land use regulations—which could be used to preserve the status quo and thereby enable them to more reliably predict the future of their clients' investments—would be a benefit to them as well. This new appreciation for the benefits of zoning by Portland's realtors provided the 1924 ordinance with its underlying rationale. Whether or not such a rationale could provide zoning constitutional legitimacy was another question.

The proponents of both ordinances stressed that zone classifications and the locations of the zones' boundaries were derived from existing conditions. This connection to what was actually there was considered essential by many of zoning's advocates in the pre-Euclidean years to provide proof that an ordinance was not arbitrary. In both cases, it was stressed that the proposed boundaries were checked in the field for their appropriateness. In Cheney's case, this was accomplished by the neighborhood committees; in the case of the 1924 ordinance, field checking was performed by members of a joint committee formed by the Planning Commission and the Realty Board.

Moreover, Cheney (1919c:7-8) claimed that it would be important to maintain the existing proportion of single-family and multi-family buildings to the total number of buildings in the city. By counting the

buildings indicated on the Sanborn Fire Insurance Maps and by adjusting that number to accommodate estimated new construction, Cheney (1919c:7) determined that, in 1919, 86% of the buildings were single-family and 6% were multi-family. These were percentages that the market indicated could be supported (Cheney 1919c:8).

The Joint Committee implied that other than the broadly applied business zones along the streetcar lines, the status quo would remain.

The Evidence

In comparing maps of the two ordinances, there are clear areas of agreement and disagreement (Figures 4.2, 4.3). Aside from the obvious differences in the number of classes, the differences in pattern and distribution of zones in much of the study area might lead one to conclude that they were responses to two different places.

Areas of Agreement. The most prominent area of agreement is bounded by the river to the west, Stark to the north, S.E. 11th to the east, and Hawthorne to the south. Both ordinances zoned this area almost entirely for commercial and industrial uses. This area was: (1) dominated by industrial and manufacturing activities from the river to Union; (2) largely commercial along Union and Grand; (3) a mixture of residential, commercial, manufacturing and vacant land between S.E. 6th and S.E. 11th, particularly between Stark and Morrison. Cheney's ordinance with its greater number of classes was able to respond more directly to the existing conditions than the 1924 ordinance as indicated by: (1) a strip of Class III commercial zoning on both sides of Grand from Stark to Yamhill and a node of Class III zoning at Hawthorne between Union and Grand;

(2) two "islands" of Class VII industrial zoning embedded in an overall zone of Class V commercial uses east of S.E. 3rd; (3) and a Class II multi-family zone boundary which more closely reflects the actual uses between Stark and Morrison, between S.E. 8th and 11th (Figure 4.2).

As indicated by the overlays for Sanborn 1924 maps for Portland, #728 and #729, Cheney created a rather complex pattern of uses in this area which both reflects existing uses and alters them. One of Cheney's rules for drawing district boundaries was that they should be drawn through the middle of blocks rather than the center of streets (1919c:6). These examples suggest that, in attempting to respond to the locations of existing industrial uses, Cheney was forced to ignore his rule. However, it is not at all clear why the individual blocks are as broken up in terms of use as they appear to be (for example, see: the commercial Class V half block between Belmont and Yamhill/S.E. 7th and S.E. 8th; the commercial Class V half block at Taylor and Salmon/S.E. 7th and S.E. 8th; the quarter block Class V zone at the southwest corner of Belmont and S.E. 9th).

Where vacant land existed, Cheney was free to create what amounts to a new commercial strip on both sides of S.E. 11th from Belmont to Hawthorne. In Cheney's plan, unlike the 1924 alternative, this commercial strip would have provided a clear commercial buffer between the residential uses to the east and the industrial uses to the west.

It is here, between S.E. 11th and S.E. 12th, from Belmont to Hawthorne, that both ordinances drew a boundary between commercial/ industrial and residential uses (Figures 4.2, 4.3). This boundary, in both ordinances, marked a shift in dominant use from

commercial/industrial to residential. Actual uses for this area support the general location of this boundary. As previously stated, existing uses between the river and the east side of Grand were almost entirely commercial, manufacturing and industrial. In the 60 block area bounded by the east side of Grand, the south side of Stark, the east side of 11th, and the north side of Hawthorne, approximately 22.75 or 38% of these blocks were taken by commercial or industrial uses; 23.125 or 39% were vacant (predominantly the former Hawthorne Park); and 13.875 or 23% were occupied by residential uses. Most of the residential properties were located north of Morrison, from the east side of S.E. 8th eastward (1924 Sanborn maps #714 and #715). Eighty-eight of the 95 buildings extant in this area, or 93%, were residential. Taking this into account, Cheney began his multi-family zone (Class II) along Stark at S.E. 9th east to the east side of S.E. 11th, then south to the south side of Alder, and south again along the west side of S.E. 12th (Figure 4.2). What his proposal doesn't reflect is that 60 of the 88 residential buildings, or 68%, were dwellings; 27 or 31% were flats; and there was one apartment building which represents 1% of the total. The 1924 ordinance zoned the entire area, from Stark to Hawthorne west of 12th, Class III commercial/industrial (Figure 4.3).

It is significant, however, that there was agreement on the general location of this boundary. Although the 1924 ordinance made no distinction between commercial and industrial uses—except noxious uses which were relegated to an "unrestricted" class not employed in the study area—it can probably be assumed that the drafters of the ordinance believed that the market would keep heavy industry out of Class III

commercial/industrial zones in predominantly residential areas east of S.E. 12th. The Cheney proposal, on the other hand, prohibited all industrial uses east of this line.

Areas of Disagreement. The remainder of this discussion will focus on the balance of the study area, from the west side of S.E. 12th to the west side of S.E. 52nd, where the pattern of existing land uses is more ambiguous and there is less agreement between the two ordinances.

The 1924 Sanborn maps indicate that there were 3,277 buildings in this area: 2,823 (86%) were dwellings; 232 (7%) were flats; 27 (1%) were apartments; 157 (5%) were shops or offices; 24 (.7%) were manufacturing or industrial; and 14 (.3%) were schools, churches, or libraries (Figure 4.10).

Cheney suggested that it would be important to retain the overall percentages of single-family dwellings (86%) and flats (6%) city wide. The percentages of buildings for this portion of the study area appear to reflect these percentages—keeping in mind that the manufacturing and industrial area has been removed. However, the Cheney ordinance indicates a significant change in these proportions in this part of the city. In this section of the study area there were a total of 410 blocks: 228.625 blocks, or 56%, were zoned Class I (single-family residential); 137 blocks, or 33%, were Class II (all kinds of residential buildings); 1.375 blocks, or .1% were Class III (commercial) and 20 blocks, or 5% were Class V (commercial); 19.25 blocks, or 5% were Class IV (schools, public and semi-public buildings, churches, parks, cemeteries, single-family dwellings)—in this case, most of the block area was taken by the Lone Fir Cemetery; 3.75 blocks, or .9%, were Class VI (hospitals, charitable institutions, etc., plus Classes I and II) (Figure 4.11).

Figure 4.10. Percentage of buildings by use in 1924.
Source: Sanborn Fire Insurance Maps, Portland, Oregon (1924).

Figure 4.11. Percentage of blocks by use (Cheney proposal and the 1924 ordinance).

The realtors' ordinance, admittedly established its commercial/ industrial Class III zones in a broadly-sweeping fashion, but it "implied" that everything else would be left "as is." Again, in this section of the study area, out of 410 blocks: 90.75 blocks, or 22% were zoned Class I residential (single-family dwellings); 220.375 blocks, or 54% were zoned Class II residential (all kinds of residences); 81.625 blocks, or 20% were zoned Class III (commercial/ industrial); and 17.25 blocks were the Lone Fir Cemetery (Figure 4.11).

Although comparing percentages of buildings to percentages of block area is not ideal, Cheney did precisely this in developing the proportions of land uses for his ordinance. And as previously stated, it is probably reasonable given the difficulty of comparing the pre-zoned built-up landscape to a proposed zoning scheme. In any case, the differences between the proportions of extant uses and the proportions of uses in the ordinances are striking as are the differences between the two ordinances. Clearly, the largest discrepancy is in the proportions of single-family to multi-family residences. The overall area, in 1924, was dominated by single-family residences (86% of buildings). The Cheney plan reduced this proportion by 30 percent to 56% of block area; the 1924 ordinance reduced the proportion of single-family residences even further to 22% so that it essentially equaled that of Class III (commercial/ industrial) which was 20% in this scheme.

The decrease in the proportion of single-family residences may have been a result of the dramatic increase in the proportion of blocks dedicated to multi-family districts in both of the ordinances. This may apply more

directly to the Cheney proposal because the proportions of the other uses in his plan are similar to those of the existing buildings, unlike the 1924 ordinance. The Cheney plan increased the proportion of multi-family residences from 8% (existing flats and apartment buildings) to 33%. The realtors increased this percentage so that more than half of the blocks (54%) were zoned for multi-family residences.

Another area of significant discrepancy between the existing uses and the ordinances occurs in the proportions of commercial/industrial uses. Here, the Cheney proposal and the corresponding percentage of existing buildings appear to conform. Buildings used as shops and offices comprised 5% of the total number of buildings. If the buildings used for manufacturing and industry are added to that, the percentage is 5.7%. Cheney's plan included no Class VII or Class VIII districts (industrial and manufacturing) in this area. However, commercial Class III (.1%) and commercial Class V (5%) total 5.1% for this section of the study area—nearly identical to the 5 percent of buildings used for shops and offices. The 1924 ordinance differs a great deal, nearly quadrupling the proportion of buildings used for shops, offices, manufacturing and industry, or 5.7%, for Class III (commercial/industrial) to 20% of the block area.

One indication of the conformity of the zones to actual uses is the proportion of existing buildings in each use category for each overall zoning classification. In other words, if there is a high proportion of non-conforming uses within a given zone, that zone would not be an accurate reflection of existing conditions. Single-family; flats; apartments; shop and offices; manufacturing and industrial; schools, churches, and public use

buildings were counted within the boundaries of Cheney's Class I (single-family), Class II (multi-family), Classes III and V (commercial) zones and the 1924 ordinance's Class I (single-family), Class II (multi-family), and Class III (commercial/industrial) zones.

A comparison between the two ordinances of the proportion of actual uses within Class I indicates a remarkable similarity for this zone (Figure 4.12 and Table I).

TABLE I
CLASS I ZONES: NUMBER AND PERCENTAGES OF BUILDINGS
BY USE

Class I Zones Number & Percentages of Buildings by Use						
	Single-Family	Flats	Apartments	Shops/Offices	Man/Ind	Sch/Ch/Pub Use
Cheney	1,906 (95%)	55 (3%)	8 (.5%)	12 (.6%)	10 (.5%)	6 (.4%)
1924 Ord.	574 (96%)	12 (2%)	0	2 (.5%)	4 (1%)	2 (.5%)

The large difference in the number of buildings between the two ordinance reflects the difference in the land area devoted to Class I districts in each ordinance (Figures 4.2, 4.3). Cheney's single-family residential districts began much closer to the river—at approximately S.E. 25th—than the realtors' ordinance which began its single-family districts west of S.E. 43rd. Knowing that the study area had fewer flats and apartments moving east, it is notable that, with an 18 block difference between the two ordinances in the east/west direction, the proportion of dwellings is only one percentage point apart in the respective Class I districts. This "agreement" and the very high percentages of single-family dwellings are indications that there was very little justification for the realtors to locate

ZONE COMPOSITION - CHENEY CLASS I
W. Side S.E. 12th - W. Side S.E. 52nd/S. Side Stark -
N. Side Hawthorne

ZONE COMPOSITION - 1924 ORDINANCE CLASS I
W. Side S.E. 12th - W. Side S.E. 52nd/S. Side Stark - N. Side
Hawthorne

Figure 4.12. Percentages of existing uses in Class I zones (Cheney proposal and the 1924 ordinance).

their single-family zone as far east as they did if, in fact, they were "following existing tendencies."

Differences between the two approaches become more apparent when the actual uses within Class II (multi-family) zones are compared (Figure 4.13 and Table II):

TABLE II
CLASS II ZONES: NUMBER AND PERCENTAGE OF BUILDINGS
BY USE

Class II Zones

	Single-Family	Flats	Apartments	Shops/Offices	Man/Ind	Sch/Ch/Pub Use
Cheney	823 (80%)	157 (15%)	16 (2%)	18 (2%)	6 (.5%)	5 (5%)
1924 Ord.	1,830 (90%)	149 (7%)	16 (1%)	7 (.5%)	9 (.5%)	10 (1%)

Again, the difference in numbers reflects the amount of block area dedicated to the class. Cheney allocated 33% of the overall block area to Class II uses, whereas the realtors' ordinance reserved 54% of the block area to this class. Although both ordinances capture approximately the same number of flats and apartments in their respective zones, the percentage of multi-family uses in Cheney's Class II districts is much higher in a much more tightly bounded area. This means that Cheney's proposal followed the "existing tendencies" more closely. One does wonder, however, whether an area that was 80 percent single-family could be said to be multi-family in nature. On the other hand, the 1924 ordinance appears to bear little resemblance to reality. Ninety percent of the buildings situated on its Class II land were dwellings; only 7.5% were flats or apartments.

ZONE COMPOSITION - CHENEY CLASS II
W. Side S.E. 12th - W. Side S.E. 52nd/S. Side Stark -
N. Side Hawthorne

ZONE COMPOSITION - 1924 ORD. CLASS II
W. Side S.E. 12th - W. Side S.E. 52nd/S. Side Stark -
N. Side Hawthorne

Figure 4.13. Percentages of existing uses in Class II zones (Cheney proposal and the 1924 ordinance).

Dramatic differences between the two ordinances can be seen when the commercial zones (Cheney's Classes III and V and the 1924 ordinance's Class III) are compared (Figure 4.14 and Table III):

TABLE III
COMMERCIAL ZONES: NUMBER AND PERCENTAGES OF BUILDINGS
BY USE

Commercial Zones	Number & Percentages of Buildings					
	Single Family	Flats	Apartments	Shops/Offices	Man/Ind	Sch/Ch/Pub Use
Cheney	94 (37%)	20 (8%)	3 (1%)	127 (50%)	8 (3%)	3 (1%)
1924 Ord.	419 (63%)	71 (11%)	11 (1.75%)	148 (22%)	11 (1.75%)	2 (.5%)

The relatively high percentage (50%) of shops and offices in Cheney's proposal is an indication of greater conformity to the patterns of existing uses even though he captured fewer of the extant shops and offices—127 versus 148 in the 1924 ordinance—within his commercial districts. This should not be surprising given the fact that the 1924 ordinance allocated 20% of the block area to this class as opposed to the 5.1% Cheney dedicated to this use. It is also notable that Cheney's percentage of block area for this use parallels the percentage of actual shops and offices (5%) (fig. 4.5). Although the proportions are virtually the same, Cheney apparently believed that it was necessary to "encourage," through regulation, the relocation of the commercial uses which were either embedded within the residential fabric or not located in the short strips or nodes he determined were "natural locations" for these uses.

What must be remembered is that Cheney was creating a pattern of uses which he believed was a more accurate reflection of natural forces than the unregulated landscape represented. What these maps reveal is

ZONE COMPOSITION - CHENEY CLASSES III & V
W. Side S.E. 12th - W. Side 52nd/S. Side Stark -
N. Side Hawthorne

ZONE COMPOSITION - 1924 ORD. CLASS III
W. Side S.E. 12th - W. Side S.E. 52nd/S. Side Stark -
N. Side Hawthorne

Figure 4.14. Percentages of existing uses in Cheney's commercial zones and the 1924 ordinance Class III commercial/industrial zones.

that although Cheney responded more directly to the existing uses, he took great liberties in interpreting what "existing tendencies" meant. What proportion of a neighborhood has to be single-family to be considered single-family? What proportion of a neighborhood has to be multi-family to be considered multi-family? What proportion of a neighborhood or arterial has to be commercial or industrial to be considered commercial or industrial? Such percentages were never spelled out by Cheney. Based on these maps, Cheney apparently was willing to say that an area was a multi-family district when 17% of the buildings were flats and apartments even if 80% of the area's buildings were single-family dwellings. Overall, the places that Cheney chose to zone commercial—or had natural tendencies toward commercial use—were 50% commercial but were also 46% residential (dwellings, 37%; flats, 8%; apartments, 1%).

The drafters of the 1924 ordinance were careful to point out to the public that their ordinance would be very different from the one the electorate had rejected. And different it was, except that they apparently thought it wise to repeat Cheney's rhetoric about following existing tendencies. Based on these maps, it would seem that the district boundaries were based entirely on a poor understanding of the exchange value of property. Poorly understood because very little thought was apparently given to the possible consequences of an over-supply of Class II and Class III land. The realtors' ordinance dedicated a whopping 54% of the block area to multi-family uses, in spite of the fact that 90% of the buildings located there were single-family dwellings. And 22% of the block area went to commercial uses even though 76% of the buildings standing

in the area were residential. Little thought was given to how much of this land could actually be absorbed by these uses but landowners and realtors could hope.

Concluding Observations

Nobody knows enough or can know enough to zone a city. As a matter of fact, cities do not grow and will not grow according to any plan, no matter how wise. Their growth is a necessary resultant of economic forces and economic accidents which nobody can foresee. —Baker, attorney for Ambler Realty in *Euclid v. Ambler Realty* (quoted in Brooks 1989:23).

The authors of both ordinances established criteria on which the locations of district boundaries—the "bête noir" of zoning (Brooks 1989:23)—would be based. Some of these were stated and some were not. What follows are some concluding observations regarding the ordinances and actual uses.

Cheney Proposal. Cheney (1919c:6) referred to the Oregon State Zoning Act, which he himself had drafted, for the criteria that he claimed to use: (1) "reasonable consideration to the character of the district;" (2) its "peculiar suitability for particular uses;" (3) the "conservation of property values;" and (4) a "direction of building in accord with a well-considered plan." And, as Cheney would state over and over again, one very important purpose of districting was "to strengthen and supplement the natural trend towards . . . [land use] segregation" (1919a:16). Unfortunately, we can never really know how Cheney's ordinance would have worked out. We can, however, make some observations based on his criteria and his ordinance as represented by the zoning maps of the study area.

Was reasonable consideration given to the character of the neighborhoods? It is evident from the actual uses in the study area that "character" can be difficult to define. In the case of the area bounded the river and S.E. 11th, where commercial and industrial uses occupied 38% of the block area, 39% was vacant land, and only 23% was occupied by residential uses, it seems reasonable that this area was considered to have a commercial and industrial character. That, in combination with its proximity to the river and to rail ("peculiar suitability"), along with the perceived need for these uses to have room for expansion provided ample reason to zone this area for commercial and industrial uses, as both of the ordinances did.

Reasonable consideration of the character of the neighborhoods becomes more difficult moving east of the commercial/industrial area. How much multi-family housing must a neighborhood have to be considered multi-family in character? When is a single-family district a single-family district? The definition of character was thought to be simple when it was assumed, as Cheney did, that most districts were naturally homogeneous in use. However, this task became more difficult in many parts of the city, such as the study area, not regulated by deed restrictions. Cheney's own estimate was that 6% of the city's land was all that would be needed for multi-family housing. Perhaps because of the number of elite neighborhoods surrounding the study area, Cheney felt that he must allow for a greater number of flats and apartments within the study area. Clearly, Cheney took into consideration the actual uses located there and drew a boundary that did reflect where the highest number of flats were situated.

However, the fact is that 80% of the buildings located in his Class II zones were dwellings, 15% were flats, and only 2% were apartments.

The "character" criterion is less problematic in Cheney's single-family and commercial districts. It must be remembered, however, that 86% of the buildings in the area overall were single-family dwellings. Cheney's single-family zones had only 5% non-conforming uses. And in his commercial zones, where he reinforced the locations he considered correct ("peculiar suitability"), 50% of the buildings within these zones were shops and offices and he retained the proportion of these uses as they existed in his ordinance (5% and 5.1%).

Regarding the conservation of property values, it is probably safe to say that judging from what is now known about the study area that Cheney's Class II zoning, if it had been adopted, would have had the negative influence on property values that the realtors' ordinance's Class II zoning had in the corresponding area—for example, the Buckman neighborhood. Cheney anticipated this in his arguments for exclusive single-family zoning:

Real estate agents say that a prospective buyer will go down a block looking for a home or home-site, and if there be one building in the block that is a flat or apartment, or even looks like one, this buyer, nine times out of ten, moves to a neighborhood where the neighbors will all be of the same home class (Cheney 1919c:8).

For reasons that are still unclear, Cheney chose to zone an area that was overall 80 percent single-family, for Class II uses, even though, according to his own reasoning, it would not stand up to this criterion.

The small areas of multi-family zoning along the major thoroughfares may have been a way to bankroll property for future commercial uses:

When [an] adjoining five or six blocks are already 80 to 90 per cent built up it is obviously impossible to anticipate a great increase in the amount of new stores that can succeed in such a district, and to throw more than two or three times the existing store property into a business district at such a point simply means a lot of property held many years in uncertainty. The income from this property in the meantime, if improved with flats, apartments or dwellings might well pay handsomely, instead of being a burden, held out of use (Cheney 1919c:9).

Because the amount of land dedicated to commercial uses in Cheney's proposal was relatively small, it is likely that the zoning for this class could have contributed to the conservation of these property values.

Little has been said regarding Cheney's height districts (Figure 4.9). There had been much discussion in planning circles, based on New York City's experience, about the need for height restrictions. Indeed, New York's ordinance relied more heavily on height restrictions than use districts. Anticipating a tremendous amount of population growth for Portland (Figure 4.15), Cheney developed what amounts to a "height district" map which "overlaid" his use map. Given the fact that when Portland did grow, it grew "out" rather than "up," the height districts, especially on the east side of the city would have been unnecessary.

Finally, as discussed in previous sections of this study, Cheney believed, without question, that the "direction of building" in a city should be "in accord with a well-considered plan" (1919c:6). However, that plan had to be, from Cheney's point of view, the zoning ordinance because

Figure 4.15. "Comparative population increase of Portland and Coast cities" (Cheney 1919a).

it was based on and was a reflection of natural laws. All other planning rested on the structure of the zoning ordinance.

1924 Ordinance. Even though Cheney's ordinance was defeated by a very narrow margin, there had been confusion among the electorate about the meaning and purposes of zoning as Cheney had articulated them. The realtors stressed simplicity and ease: simplicity in their approach to establishing land use classes and district boundaries and ease in amending the map. However, as this study illustrates, the realtors appear to have been infected by a kind of speculation frenzy which caused them to lose sight of the realities of the market and drove the size and locations of districts. In fairness, Cheney (1919a:20) predicted in 1919 that Portland's population would exceed 700,000 by 1940. Certainly projections like that could be fuel for speculation. Unlike the Cheney proposal, the 1924 ordinance became a reality and stood, with amendments, until 1959.

The criteria that the authors of this ordinance set out for themselves in drawing district boundaries were that all main or through street car lines were zoned business; all other locations were zoned as "existing conditions indicated" (LTK 1975:4). As seen from this study, it is difficult to imagine how the existing conditions, especially east of S.E. 26th could have justified the Class II zoning it received. Ninety percent of the buildings within this ordinance's Class II zones were single-family dwellings and that includes the areas where the most flats and apartments were located. For the city as a whole, the 1924 ordinance allocated 43.5% of the city's land area to Class II uses (City Planning Commission 1924:3).

City-wide, the realtor's zoned 23.6% of the city's land for Class III (commercial/industrial) uses (City Planning Commission 1924:3). In the predominantly residential portion of the study area (west side of S.E 12th to west side of S.E. 52nd)—where 94% of the buildings were residential—the 1924 ordinance allocated 20% of the land to Class III uses. This phenomenon of excessive land zoned for commercial uses was not unique to Portland, however. The following remarks regarding a similar situation in Los Angeles were contained in a report of the Portland Planning Commission in 1934:

It was a wise man who said 'you cannot make a silk purse out of a sow's ear.' Neither can you make business property out of subdividers' illusions, deed restrictions or zoning classifications. Sound economic forces create the relatively limited frontage of any city which can profitably be devoted to business use. Unfortunately, most of the so-called business frontage was born of the wedlock between ignorance and speculation and the naked miles of vacant lots along our arteries of travel are mute testimony to an economic waste of such proportions that the imagination is startled at the farce of perpetuating this needless waste into the eternity of tomorrow (from a speech by George H. Coffin, Jr., M.A.I. referring to Los Angeles, contained in a report of the Portland City Planning Commission, September 17, 1934).

There was little doubt that, by 1930, zoning, in the guise of the 1924 ordinance, had solved few of the city's problems and was no substitute for a comprehensive city plan. In 1931, the city fathers once again turned to an outside expert, Harland Bartholomew from St. Louis, to develop a comprehensive plan for the city. It is beyond the scope of this study to examine his proposal, however, it is instructive to look at his criticism of the 1924 ordinance. While saying that the ordinance was "exceedingly advantageous and beneficial in its influence," he also commented that the

provisions were "considerably out of scale and ineffective" (Bartholomew 1932:6). Regarding the Class II zoning, Bartholomew observed:

Apartment house areas are unusually large, exceeding forty per cent of the total city area, while recent investigations disclose that probably no more than one per cent of the area of a city will ever be used for multiple dwelling purposes. This has the unfortunate affect of blighting large sections which are developed by single-family residences. The invasion of a few apartment houses discourages further single-family residence construction, reconstruction, and good maintenance and thus destroys the logical form of development for much of the city's area (Bartholomew 1932:6).

According to Bartholomew, the process of invasion had apparently not been arrested by zoning, or at least this kind of zoning; instead, incorrect zoning had promoted it. Indeed, the expectation of the adoption and the actual enactment of the ordinance does seem to have given a boost, if briefly, to apartment building (Figure 4.16). Bartholomew (1932:96) referred to the data in Figure 4.16 and cited the statistic that between 1913 and 1931 there were 50 residences built for every apartment building to argue that Portland was overwhelmingly a city of dwellings. Too much land had been dedicated to commercial uses as well:

The present zoning ordinance is too liberal in its provision for commercial development. From recent statistical investigations in a large number of American cities it has been found that between two and three per cent of the total developed area is absorbed by retail stores. The Portland zoning ordinance is considerably out of scale in this respect and, again, is bound to blight those areas which cannot be absorbed by this use.

(Bartholomew 1932:6-7)

Furthermore, the ordinance lacked any sort of population density regulation, which Bartholomew claimed could be found in the zoning

Figure 4.16. Number of apartments and dwellings built between 1913 and 1931 (Bartholomew 1932).

ordinances of most American cities (Bartholomew 1932:7). Finally, Portland had no officially adopted comprehensive plan (Bartholomew 1932:7). This was what Bartholomew was hired to do.

The 1924 ordinance remained in effect until the adoption of a new zoning ordinance in 1959. In 1951, it was determined that of the land area devoted to residential use, 95% was occupied by single-family houses (LTK 1975:14), and yet, 50% of the land devoted to residential uses was zoned Class II (multi-family) (LTK 1975:15). Moreover, from the time of enactment to the adoption of the new ordinance on June 30, 1959, 1,615 map changes were approved mostly on a lot by lot basis (LTK 1975:15) thus defeating the stability that early planners had sought.

CHAPTER V

LONG TERM IMPACTS: BUCKMAN

Once a block of homes is invaded by flats or apartments, few new single family dwellings ever go in afterwards. It is marked, 'on the toboggan,' the land adjoining is forever after held on a speculative basis in the hope that it may all become commercially remunerative, without thought of the great majority of adjoining owners who have invested for a permanent home and home neighborhood only (Cheney 1919c:7).

The Buckman neighborhood, located in the western portion of the study area (S.E. 12th to S.E. 28th, Burnside to Hawthorne) (Figure 5.1), is one of the oldest communities in southeast Portland. It was named after Cyrus Buckman, horticulturist and City Council member (Portland Planning Commission 1977:5). By the 1880's, Buckman was an area of houses and orchards but it would rapidly grow into a neighborhood of comfortable and inexpensive residences. As the city grew, Buckman became the logical place for inexpensive worker housing to develop because of its proximity to the industrial and commercial area west of S.E. 12th. It was largely the Buckman section of the study area that had become invaded by 1924, by flats and to a much lesser extent, as this study has shown, apartments.

In 1920, Cheney determined that nearly all of Buckman was multi-family "in character" and zoned it accordingly. The 1924 ordinance zoned the entire neighborhood either Class II (multi-family) or Class III

Figure 5.1. The Buckman neighborhood, the study area, and bordering "elite" neighborhoods.

(commercial/industrial) with no limit in height and, perhaps more importantly, density. Buckman, therefore, provides an opportunity for checking the long term impacts of Class II zoning on an area which had been, prior to zoning, primarily made up of single-family residences and small "flat" buildings. A Planning Commission report from 1977 confirmed Bartholomew's predictions about the effects of Class II zoning:

Since 1924, Buckman has been zoned as a medium density residential area with commercial cores developing around and through portions of the neighborhood. This zoning pattern encouraged the development of multiple dwelling units and apartments as can be witness today (Portland Planning Commission 1977:5).

The Planning Commission, at that time, did not see this sort of development pattern as necessarily negative, however. Rather, it determined that the scale and design of apartments and the perceived requirements of the automobile were also important factors in the success or failure of a neighborhood (Portland Planning Commission 1977:5). A combination of deteriorating single-family dwellings and a significant increase in the number of poorly designed and cheaply constructed apartment buildings changed the character of the neighborhood and brought with it crime, noise, traffic problems, and instability within the community (Portland Planning Commission 1977:5).

By the mid 1960's, the neighborhood had deteriorated to such an extent that residents began to actively seek solutions. Application was made to be included in the Model Cities Program in 1968 and failed; between 1969 and 1971 efforts were made to seek funding for the physical

improvement of the area with little success; finally, in 1975, Buckman joined with other southeast neighborhoods to write its own plan.

At this time, a zoning subcommittee was formed to study the connection between zoning and neighborhood stability (Portland Planning Commission 1977:9). In 1976, the subcommittee was responsible for collecting over 75% of the signatures of property owners from two selected sub-areas in the neighborhood requesting that their property be down-zoned from "A-1"—the zoning ordinance of 1959 rezoned all Class II districts within the neighborhood, A-1 (medium density apartments) (Figure 5.2)—to "A2.5" duplex zoning (Portland Planning Commission 1977:6). According to a 1976 Planning Commission staff report, Buckman supported more A-1 zoning than any other comparable neighborhood in the city (Portland Planning Commission 1976). By 1977, single-family dwellings made up only 57% of the residential uses; 18% were duplexes; and 25% were apartments (Portland Planning Commission 1977:16).

In the Planning Commission reports regarding the request of the neighborhood to down-zone its A-1 and A-0 (high density) districts, a number of thought provoking observations about zoning were made:

- Historically, zoning treated apartments "preferentially" in Buckman. This imposed hardships on single-family structures because there was no incentive to maintain such property (Portland Planning Commission 1976).
- The zoning ordinance of 1959 did establish height and bulk regulations which were previously lacking. Thus Class II zoning

Figure 5.2. Buckman, Kerns, Sunnyside rezoning study area.

was subdivided into a number of multi-family classes according to height and density. Class II became A2.5 (duplexes), A-1 (medium density apartments with specific height and bulk requirements), or A-0 (high density, high-rise apartments).

- Siting and construction quality, in other words design issues, were not controlled in the regulations as they stood (Portland Planning Commission 1976).
- A-1 zoning throughout the city was unsuccessful primarily because of the off-street parking requirements which inevitably meant that the land surrounding apartment buildings were covered with asphalt. "This has had a serious debilitating impact on the otherwise older development at single family densities, having lawns, flowers and trees" (Portland Planning Commission 1976).
- There were numerous land use permits requested and approved between the enactment of the 1959 ordinance and 1977. Many of these were requests for changes from A-1 to commercial. In 1963, a request was made from a developer for a zone change from A-1 to A-0 (high density, high-rise apartments). A 1977 Planning Commission report states:

Even though his plans were inadequate the Planning Commission approved the zone change based on a staff recommendation that it would be better for the neighborhood to eliminate some of the existing older housing. The staff also recommended at that time to consider zoning all of the land west of 16th A-0 (Portland Planning Commission 1977:19).

Clearly, by 1977, there was some concern that the Planning Commission may have been its own worst enemy.

- The majority of sales in the area were still single-family houses. In 1970, 77% of sales were single-family houses and 23% multi-family. By 1975, the proportion of single-family sales had decreased to 57% with multi-family at 43%. The report found it significant and hopeful that single-family sales were still in the majority (Portland Planning Commission 1977:21).
- Realtors suggested that buyers who might be interested in a particular house were ambivalent about the neighborhood because of crime, deterioration, and apartment-commercial development (Portland Planning Commission 1977:22).
- The Planning Commission determined to its own satisfaction that there was a "direct correlation between apartment construction and crime" (Portland Planning Commission 1976).
- Banks had "no problem" financing new multi-family construction in Buckman. However, they were hesitant about financing existing single-family housing. Generally, they would not offer prime rates to these buyers (Portland Planning Commission 1977:26).
- Developers had mixed reactions to the idea of rezoning Buckman. One developer said that it would be the "death knell" for the neighborhood. Others felt it would help to improve the neighborhood (Portland Planning Commission 1977:26).

In recommending for the zoning changes, the Planning Commission made these comments:

It is known that a correlation exists between the crime rate and apartment house development. It is known that the increased demand for sanitary and storm sewers have a cost associated with them. It is known that typical multifamily development results in declining school enrollment which creates serious neighborhood problems, threatening the closure of neighborhood schools and ultimately depressing the market value and attractiveness of a home that might be sought after by families with school age children.

On the other hand, it is also obvious that higher densities in this area can support more efficient use of mass transit, that employment centers in the downtown and central eastside create a demand for multifamily, thus the multifamily supports a higher tax base in the employment centers, etc.

. . . the conclusion among developers that only 100 additional multifamily units will be built in the area leaves hanging in the balance some 1700 plus single family and duplex units that could gradually deteriorate through speculative anticipation. It seems clear that the public interest is best served by encouraging the maintenance and upgrading of the existing housing stock (Portland Planning Commission 1977:31).

E. Kimbark MacColl (1979:307), in describing the legacy of the 1924 ordinance stated that, between 1960 and 1977, 200 homes were demolished in Buckman and 100 motel-like apartment buildings built. The ratio of renters to owners was two to one despite the fact that 70% of the population lived in single-family dwellings or duplexes (MacColl 1979:307). Moreover, the transient nature of the population appeared to have produced the highest rate of juvenile delinquency in the city (MacColl 1979:307). MacColl harshly criticized the role that realtors played in producing this outcome from the design of the 1924 code to actively enticing homeowners in the neighborhood to seek high density zoning for speculative purposes (MacColl 1979:303-307).

It must be pointed out, however, that it is likely that the outcome for Buckman would have been the same under Cheney's well researched, "scientific," ordinance because Cheney included nearly all of Buckman within his Class II boundaries. Cheney's creation of only one multi-family classification (Class II) and, in this area, the creation of one large multi-family district, meant that all scales of multi-family dwellings, from single-family flat conversions to large scale apartment structures, were grouped together. The result might well have been different if it had been zoned for scale rather than use.

Cheney had promised that zoning would put an end to deteriorating neighborhoods. In 1977, the Planning Commission recognized publicly that zoning could cause neighborhood deterioration:

It makes no sense whatsoever for the City, through its zoning practices to encourage the deterioration of valuable housing stock; particularly when that housing stock is potentially the kind that is attractive to young families with children who are willing to make time, energy and money investments in them.

(Portland Planning Commission 1977:29)

The proposed down-zoning of Buckman was adopted by the City Council in April of 1977.

CHAPTER VI

FINDINGS AND CONCLUSIONS

The thesis of this study is that zoning, as we know it today, is not a neutral tool but a product of culture, time, and place. It is also the thesis of this study that the theories and methods used by zoning's first advocates shaped the assumptions that have been attached to zoning ever since. The purpose of this study is to uncover some of the underlying rationales and methodologies which set the model for zoning as it has been most widely accepted and practiced. This study attempts to better understand this model by examining the rationales behind the classification and location of land use zones in a fast-growing area of Portland, Oregon for its first zoning ordinance through history, culture, and geography.

FINDINGS

The findings of this study are as follows:

The legacy of Spencerian philosophy and social Darwinism. The importance of Spencerian philosophy and social Darwinism to the development of Park's "human ecology," the development of planners' theoretical justifications—particularly in the case of Cheney—for zoning, and Justice Sutherland's position in *Euclid* cannot be overemphasized. Spencerian philosophy dominated the thinking of laissez-faire intellectuals of the day. In an odd twist of reasoning it also provided the rationale necessary to convince Justice Sutherland and practitioners such

as Cheney that government interference in the guise of zoning was necessary and constitutional. Social Darwinism and human ecology made the connection between the processes of the "natural" and "human" worlds—particularly the processes of invasion and succession—which allowed Begemann and Cheney to describe small neighborhood grocery stores as "weeds" that "shoot up in the midst of a flower bed" of single-family homes (Begemann 1918:12). The separation of uses, the containment of "weeds" in certain areas, was essential to the health of the flower bed of residences and by extension, the city as a whole.

The birth of social science methodologies and Cheney's "deductive" approach. Social Darwinism supplied Cheney's theoretical foundation and colored his methodology. Scientific investigation relies on empirical observations and inductive reasoning. Cheney's methods were tainted by an essentially deductive approach. As seen in his industry survey and his support and inclusion of the Begemann Report in his work, evidence was collected and analyzed in order to support a pre-determined outcome. And the outcome would support his social Darwinist view of planning that uses must be separated from each other. In fairness, social science methods were still being worked out and Cheney was to some degree, developing his own approach to planning.

The impact of this approach is especially evident in his classification scheme and his overarching belief in the creation of homogeneous districts only. To his credit, Cheney collected and used an enormous amount of data to inform his proposal, particularly the size and location of his districts. This produced districts which more directly responded, both in

size and location, to the uses found there (Map Study #2). This tended to reinforce existing nodal commercial districts at street intersections and create short sections of commercial and multi-family uses rather than the exceedingly long strip commercial districts as was the case in the realtors' code.

"Ecological" processes were not well understood. Map Study #1 indicates that the processes of invasion and succession between 1909 and 1924 were not quite as described and predicted by Begemann and Cheney. There was no invasion of dwellings into the predominantly industrial and commercial area from the river to S.E. 7th. The invasion of apartments into the predominantly single-family area between S.E. 12 to S.E. 52nd was insignificant.

There was a kind of invasion of flats—single-family residential-scale buildings—primarily between S.E. 12th and S.E. 23rd. The process was more one of changing uses of existing structures than the invasion of new structures built for "inappropriate" purposes. Even this most "invaded" neighborhood remained predominantly an area of single-family dwellings after 15 years—between 1909 and 1924—of unregulated development. The scale and character of the buildings in the study area remained overwhelmingly single-family residential.

In 1909, there were a small number of shops located within the residential fabric between S.E. 12th and S.E. 52nd. In 1924, the original shops were still there but there was only one new shop located within a residential area. Instead, new shops tended to locate at intersections along the streetcar routes and more major streets. In other words, the market

appears to have been effective, between 1909 and 1924, in keeping the number of shops within the residential fabric to a minimum.

The importance of "scale" and bulk regulations. Cheney apparently understood that the issue of scale was important to the long term viability of a neighborhood as evidenced in his height districts and his observations about flats vs. larger apartment buildings (1919c:12). And yet, in Portland, Cheney provided for only one multi-family class which included all scales of multi-family dwellings, from rooming houses to apartment buildings. Given his predilection for segregating uses, and given the predominance of single-family structures within his multi-family districts in the study area, one can only attribute his broad Class II use classification to his social Darwinist beliefs that any multi-family use should be separated out of single-family zones. In Cheney's hierarchical scheme, "use" dominated issues of scale or bulk. After all, Begemann's study focused on invasive uses not the invasion of large buildings per se. Cheney did create height limits, although they were high—four stories in the Buckman area—in his Class II zones.

The Class II uses in the adopted ordinance were essentially the same, grouping all scales of multi-family buildings together. In retrospect, as the Buckman example illustrates, use segregation seems less important than limiting bulk especially in residential areas. Scale, more than use, negatively impacted Buckman over time. The 1924 ordinance did not regulate height or bulk.

The geometries of Cheney's districts were largely a result of what was there at a particular time. Cheney based the locations of his zones on

"existing tendencies" which he carefully mapped and studied. He did this because he believed that he must follow the geometries dictated by natural economic and social forces manifest in the unregulated city. As a result, his commercial, industrial, and apartments districts were much more tightly bound than those in the 1924 ordinance; his commercial districts were more nodal and multi-family districts much less extensive.

His methodology could not be followed today, however, and produce the same land use geometries. When Cheney studied the city, it was still relatively unregulated. There were the building codes which regulated the location of dangerous and noxious uses, and there were the deed restrictions of the elite residential districts which excluded multi-family, commercial and industrial uses, and people such as Japanese, Chinese, and African Americans. These "districts," Cheney left intact—so did the realtors. However, for the remainder of the city, as in the study area, he took his cues from empirical observations of what was there—the expression of the workings of the market—and drew his district boundaries around what was acceptable within his theoretical framework. Today, land use form is not merely an expression of economic and social forces but also of previous layers of government regulations (zoning) and incentives (home mortgage deductions, tax deferments for businesses, transportation policies, environmental policies), physical forces, and cultural constructs. Given his theoretical foundation, the coarse grained land use morphology that predominates in our urban areas today, would be accepted and emphasized—very unlike the relatively fine grained pattern he achieved by responding to early 20th century land use morphology.

The geometries of the realtors' ordinance was intuitive, an attempt to maintain the freedom of the market within broadly defined income producing property zones, and a reflection of the dominant mode of public transport at the time. The real estate industry was in large part responsible for bringing Cheney's ordinance to a public vote and for its eventual defeat. The Citizens' Anti-Zoning League—which was largely made up of real estate agents—called Cheney's ordinance "the most vicious instance of discrimination in favor of the wealthy property owner and against the small property and home owner that has been attempted for many years" (*Telegram* 1920:March 24). They claimed this was because it would eliminate all businesses and garages from all residential districts and would reduce building, especially apartments, which would drive up rents (*Telegram* 1920:March 24). After the defeat of Cheney's proposal in the polls, they began to realize that there was much to be gained in drafting an ordinance themselves.

What is known about the 1924 code is that the realtors and planning commission intended for the ordinance to focus on broadly defined use separation only and that it be simple to understand, apparently simple to draw on a map, and easy to amend. The approach to district (zone) location appears to have been intuitive—it makes sense to place commercial/industrial districts along transportation corridors—but no assessment seems to have been made about how much land area should be allocated to each land use. We also know, as Map Study #2 indicates, how it measures against the existing uses and what geometries it took. What becomes clear with an examination of the impacts of this ordinance on the

study area is there were three objectives: (1) maintain the freedom of the market within broadly defined and overly bounded income producing property zones; (2) protect the elite single-family residential districts; and (3) provide some sort of framework for future planning.

This approach resulted in an oversupply of multi-family and commercial land. As early as 1932, Bartholomew observed that large areas of single-family neighborhoods which had been zoned multi-family—such as neighborhoods within the study area—were "blighted." In his view, this was because the 1924 ordinance had not been based on a comprehensive plan. Moreover, it created enormously long commercial/industrial corridors which bisected neighborhoods. This commercial strip zoning was a reflection of the dominant mode of public transport at the time, the streetcar, and was in sympathy with contemporary zoning ordinances across the country.

As a result of an unnecessarily broad multi-family zoning classification and an overly bounded multi-family district, Buckman was still in decline 50 years after the adoption of the realtors' code. The unfortunate experience in Buckman led planners in 1977 to suggest that it made no sense for the City to essentially encourage the deterioration of neighborhoods through its zoning practices as had been the case in Buckman (Portland Planning Commission 1977:29).

The importance of a comprehensive plan. As has been seen, there was no theory, explicit goals, or comprehensive plan to drive the methodologies behind the 1924 ordinance and it failed to produce even the profits the realtors must have hoped for. Cheney's ordinance wasn't based

on a comprehensive plan per se, but he believed that if the zoning ordinance were properly prepared— supported by empirical studies, scientific analyses, observations in the field— it should be an accurate reflection of the city as "nature" wanted it. Although the outcome for Buckman would probably have been the same, Cheney was careful to base his assumptions on the proportion of each land use to the existing situation. Overall, his ordinance would not have produced an oversupply of land for multi-family and commercial uses. His ordinance on a city-wide basis does show the entire frontage of both the Willamette and Columbia Rivers zoned industrial but that was not the focus of this study.

Cheney's approach was contrary to that of the Standard Zoning Enabling Act (1926) which directed that zoning must be in accordance with a comprehensive plan (Mandelker and Cunningham 1990:477). It is worth noting that in spite of the adoption of the enabling act by many states, this requirement was rarely followed. In most municipalities the zoning map came first and in many municipalities the zoning map simply became "the plan." Most courts have not given the requirement that zoning follow a comprehensive plan its literal meaning (Mandelker and Cunningham 1990:477). In the leading case, *Kozesnik v. Montgomery Twp.*, 131 A.2d 1 (N.J. 1957), the court held that this requirement did not require a comprehensive plan in a "physical form" outside of the zoning ordinance (Mandelker and Cunningham 1990:477). The court held that the requirement's intent was to prevent a capricious use of zoning. A "plan" suggests "an integrated product of a rational process" and "comprehensive" requires "something beyond a piecemeal approach"

(quoted in Mandelker and Cunningham 1990:477). According to Mandelker and Cunningham (1990), most courts still take this position.

The first break away from this interpretation came in 1973 in an Oregon case, *Fasano v. Board of County Comm'rs*, 507 P.2d 23 (Or. 1973). The court held that any change in zoning must be consistent with the comprehensive plan. Consistency with a pre-established comprehensive plan was seen as necessary to prevent arbitrary decision-making in the land use planning process and to resolve the "conflicting societal pressures" that land use "programs" make on the use of land (Mandelker and Cunningham 1990:478). According to Mandelker:

. . . the courts prefer the advance statement of principle for land use decisions [through plans] to the ad hoc adjustments that commonly take place when these principles are not provided (Mandelker and Cunningham 1990:478).

Social exclusion goes with physical exclusion. The issues of time, culture, and place come together in the exclusionary aspects of zoning ordinances. Cheney's arguments for the preservation of single-family neighborhoods were full of subtle and not so subtle references to social exclusion. There were references to apartment dwellers as "floaters" and talk about the need to protect "the most important social unit, which is the single family, living and developing by itself" (Cheney 1919c:7). Begemann (1918) described renters as those who "do not care so much for private home life," and home owners as those desire "private home life with a yard and garden" (Begemann 1918). Homeowners and renters should live near each other but not together, "the trouble is that in actual practice there is a continual breaking over of one class of buildings into another class"

(Cheney 1918:2). Zoning would be the remedy to this "evil" (Cheney 1918:2). Various classes of buildings house various classes of people, and at least one citizen chosen to draw and approve district boundaries for his neighborhood during the Cheney planning process, got the message that the segregation of people could go hand and hand with zoning (*Oregonian* 1919:Nov. 1).

The discriminatory aspects of zoning were apparent to both advocates and detractors. It clearly favored wealthy property owners—as evidenced by the preservation of single-family uses in the elite neighborhoods in both ordinances—and single-family homeowners and therefore upper- and middle-class "families," an institution it was meant, in part, to preserve. However, for Cheney, zoning was not discriminatory. The segregation that was necessary to provide the greatest good to the greatest number of property owners, at least, was a reflection of the universal, underlying laws of social Darwinism.

CONCLUSIONS

The importation of the German concept of zoning to this country occurred during a time when Spencerian philosophy, laissez-faire attitudes, and a veneration of anything scientific dominated the American intellectual scene. American notions of zoning, especially the strict segregation of uses, are, in a very real sense, a product of all of these influences but especially Spencer's social Darwinism. For innovative planners, particularly Cheney, social Darwinism provided the explanation for urban decay, and zoning, designed around ecological principles, would provide the solution. Urban decay resulted from the invasion of

inappropriate uses into single-family neighborhoods and the invasion of residences into industrial areas. Economically healthy cities were those in which uses were strictly segregated into homogeneous districts, a natural tendency which could be observed. "Modern" planners, such as Cheney, believed that if adequate preparatory work could be done, zoning could provide a foundation on which to build future planning efforts. Despite fundamental contradictions in his reasoning, which he was apparently unable to see, Cheney believed that the zoning map was a reflection of the ideal city; the city as it would be if there were only "natural" forces at play.

The ecological explanation offered by social Darwinism seemed to resonate with early planners who saw their cities overcrowded with "foreigners" and the ever increasing presence of the automobile. Scientific methodologies allowed planners to be able to see the city differently, to survey who and what was there, and to predict what the future needs might be. Zoning, it was hoped, could bring order out of confusion, and make change more predictable.

In this study, two very different approaches to zoning the same unregulated landscape were examined (Table IV). One had a strong, clearly articulated theoretical foundation; the other had none. One relied on scientific methods—if tarnished by Cheney's deductive tendencies; the other depended on intuition, political savvy, and self-interest. As might be expected, these two very different approaches produced very different land use taxonomies and boundary locations. Although Cheney's ordinance emphasized the separation of uses (eight use categories), his district boundaries might have been less destructive, not in Buckman where both

TABLE IV
A COMPARISON BETWEEN THE CHENEY PROPOSAL AND THE 1924 ORDINANCE

	Theoretical Base	Methodology	Classes	Class Composition	Boundaries	District Geometries
Cheney Proposal	Social Darwinism	Empirical but Deductive No Comp. Plan	8 Use Classes 4 Height Classes	Strict segregation of uses for single-fam, commercial, industrial. Multi-fam uses mixed.	Relatively tightly bounded districts closely related to existing uses.	Commercial nodes, short commercial and multi-fam strips, large single-fam districts.
1924 Ordinance		Intuitive Political Laissez-faire No Comp. Plan	3 Use Classes 1 Unrestricted	Broadly defined multi-fam and commercial/industrial. Exclusive single-fam districts.	Over-bounded, little relationship to existing uses.	Long, linear commercial strips. Large multi-family districts. Exclusive single-family districts.

ordinances agree, but in the remainder of the study area as well as the city as a whole because his districts tended to be tightly bounded and were more closely related to the existing uses. Although Cheney believed in homogeneous zones, they were located more closely to each other and to where the market, social, political, and physical forces put them in the first place. We will never know how successful Cheney's proposal would have been as a foundation for future planning efforts but we can see that its success would have depended upon not only on its methodological approach but the fact that it was based on an essentially early 20th century urban morphology.

Cheney's conception of zoning rested on his understanding of ecological processes which seem, today, convoluted and illogical. Tendencies to homogeneity of land use are "natural" and therefore "good," "healthy;" the processes of invasion and succession somehow are not natural, but "evil," "dangerous," must be stopped. It is noteworthy that the New Urbanists and neotraditionalists also have found their theoretical home in ecology but instead of emphasizing homogeneity and segregation, they suggest that ecological principles require diversity and integration. Instead of seeing the health of the city dependent on the prevention of the processes of invasion and succession, they see the survival of the human community in the promotion of mixing and connection. Who's conception of ecological principles is correct? Certainly modern critics would say that Cheney got it all wrong.

Seeing zoning as a solution to urban problems is seeing the solution in spatial terms. Given the inherent spatial qualities of land use zoning it

is surprising that geographers have paid so little attention to it. There is probably no other discipline better equipped theoretically and methodologically to investigate the connection between ecological principles and zoning or to inform planners as to the classification and location of land use zones. Urban geography has borrowed extensively from the "spatial logic" of Park's human ecology and the model making that it produced (Park and Burgess' "Concentric Circle Model") and inspired (Marston et al. 1989:652). Some geographers have suggested that these models are flawed by a sociological orientation which assumed that social organization was created by spatial competition, instead of the other way around (Marston et al. 1989:652). The study of the city, its form and its functioning, has proven to be a highly complicated proposition. In their chapter, "The Urban Problematic" in *Geography in America* (1989), Marston et al., while praising urban geography for its contribution to the promotion of model-building within the discipline, criticize approach after approach for being too limited or narrowly focused. Indeed, the forces at play are numerous: economic, cultural, sociological, political, physical. Add to these the influences of technology (innovations in transportation, manufacturing, communication, and building) and history, "no social, political, and economic relation can move into a new phase without pulling with it a massive baggage from its collective past" (Marston et al. 1989:668); it is probably fair to say that geographers are still learning how to learn about the city. However, it is geography's focus on the spatial implications of things which makes it particularly appropriate for the study

of proposed land use zones, especially as it relates to rezoning existing cities.

The success of zoning probably rests on a balance between the goals of a community and the recognition and understanding of the "invisible" forces at play. Zoning will fail if it is merely intuitive, as the 1924 ordinance demonstrates. But it may also fail if the underlying forces, that apparently so profoundly influence the city, aren't adequately understood and taken into account, as Cheney's orthodoxy—his belief in homogeneous, strictly segregated land use zones—illustrates.

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APPENDIX A

THE VILLAGE OF EUCLID v. AMBLER REALTY CO. (1926)

Zoning spread rapidly after the New York City Building Zone Resolution sustained constitutional attack in the New York courts in *Lincoln Trust Co. v. Williams Bldg. Corp.*, 128 N.E. 209 (N.Y. 1920). By 1922, 20 state zoning enabling acts and fifty municipal zoning ordinances were in force or in process (Mandelker and Cunningham 1990:166). By 1926, 43 out of the then 48 states had adopted zoning enabling acts and 420 municipalities had adopted zoning ordinances (Mandelker and Cunningham 1990:166). Decisions in favor of zoning had been rendered in the highest courts of California, Illinois, Kansas, Louisiana, Massachusetts, Minnesota, New York, Ohio, Oregon, and Wisconsin. Whereas adverse decisions had been rendered by the highest courts of Delaware, Georgia, Maryland, Missouri, and New Jersey (Mandelker and Cunningham 1990:166). As a result, there was some question as to the future of zoning as a technique which government could use to control private land use until the Supreme Court declared that this technique did not violate the fourteenth amendment's due process clause in *Village of Euclid v. Ambler Realty Co.* (1926).

The Village of Euclid, a suburb of Cleveland, was a predominantly rural community of 5,000 to 10,000 people when it became the third municipality in Ohio to adopt a comprehensive zoning ordinance in 1922

(Mandelker and Cunningham 1990:63; Brooks 1989:5). The entire village was divided into six classes of use districts—which were nested in the conventional pyramidal fashion, three classes of height districts, and four classes of area districts (Mandelker and Cunningham 1990:64). Euclid's zoning ordinance limited industrial zoning largely to an area between the two major railroads which bisected the city. Unfortunately, from Ambler Realty's point of view, nearly half of its 68 acre tract was zoned residential, including 1,800 feet along Euclid Avenue which paralleled the Nickel Plate railroad (Brooks 1989:5; Mandelker and Cunningham 1990:63).

Assuming that the tract would be developed for industrial uses, Ambler Realty and others felt that a large part of the use value of the undeveloped tracts in the village had been "taken" by public authority for some "imaginary" public purposes without compensation (Brooks 1989:5). From Ambler Realty's point of view, the residential zoning of its tract created a cloud on its title, damaged the tract's salability, and depressed its value substantially (Brooks 1989:5).

Located at the edge of a rapidly growing industrial city, the village looked to zoning to preserve its rural character. Single-family residential development was encouraged and protected in the ordinance at the expense of industrial and business development (Brooks 1989:6):

Single-family—not industrial—development was the 'natural and normal' pattern of suburban development. . . Zoning was rational and scientific, not arbitrary and capricious. Hardship, mistakes, or changed conditions could be handled by administrative appeal or by amendment (Brooks 1989:6).

A bill of complaint was filed by Ambler Realty with the support of other substantial property owners against the village in U.S. District Court

in Cleveland in May of 1923. A decision against the village was rendered in January of 1924. The village appealed to the Supreme Court in April, 1924. Briefs were filed by James Metzenbaum (for the village) in late 1925, and Newton D. Baker (for Ambler Realty) in January, 1926. The Court heard and then reheard the case at the request of Justice Sutherland. Alfred Bettman asked the Court, on rehearing, to decide the case solely on the constitutionality of zoning in "principle" (Mandelker and Cunningham 1990:73). The Supreme Court's decision, written by Justice Sutherland, in favor of the village was rendered on November 22, 1926.

The underlying arguments or rationales of all the parties involved in this case reveal how zoning was understood during the early 1920's. *Euclid* provided the legal foundation for zoning and became the model, however questionable, for how zoning in America would be understood.

On behalf of Ambler Realty, Baker argued successfully before Judge Westenhaver in federal district court that *Euclid* was an undeveloped portion of the Cleveland metropolitan area. Industrial development contributed to the growth and prosperity of Cleveland as well as the growth and prosperity of the United States (Brooks 1989:8). Industrial activities "naturally" followed the railroad and other transportation lines so that only 15 percent of the entire metropolitan area, including Ambler's 68 acres, was available for industrial development (Brooks 1989:8). Because of its location, the Ambler tract was peculiarly appropriate for industrial development. Baker stated that Ambler was not complaining about the nuisance provisions of the ordinance, rather:

. . . the plaintiff says that the ordinance, to the extent that it (otherwise) restrains or prohibits the use of building upon its

. . . lands, is arbitrary, unreasonable and burdensome in its operation and effect; that it was enacted for the purpose of preserving the ideas of beauty officially entertained by the members of the council . . . and excluding uses of private property . . . offensive to the eccentric and supersensitive tastes of said members of council and arresting and diverting the normal and lawful development of the lands of the plaintiff and other similarly situated lands . . . from those industrial, commercial and residence uses for which it is best suited and most available, all of which this plaintiff avers is done by lines arbitrarily and irrationally drawn and by restriction which invade alike the rights of private property and personal liberty guaranteed by the Constitution of the United States . . . –Baker (quoted in Brooks 1989:8-9).

In Judge Westenhaver's opinion, the ordinance did, in fact, prevent Ambler from realizing the expected increased value of its land for trade, industrial, and commercial purposes, therefore Euclid had "taken" Ambler's property without compensation (Brooks 1989:10). In Westenhaver's view, regulations must bear a "real and substantial relation" to the maintenance and preservation of the public safety to be valid and Metzenbaum had not shown such a relationship to the court (Brooks 1989:10).

Bettman, who participated on behalf of the Village of Euclid both at the federal district court and Supreme Court levels, had serious misgivings about the strength of the village's position and thought it was not the right case with which to test the constitutionality of zoning. He wrote in a letter following the decision of the federal district court:

Regarding the Euclid Village zoning decision, the case was unfortunate. . . . The City made no scientific survey, and in an effort to keep the village entirely residential, the local authorities zoned all as residential and business, except a very narrow piece along the railroads, too narrow for a practical industrial development. It was a piece of arbitrary zoning and

on the facts not justifiable. . . . Everybody advised against an appeal, because on appeal the decision is sure to be affirmed, even though the upper court disagrees with the opinion
 –Bettman (quoted in Mandelker and Cunningham 1990:73).

It is likely that these sentiments contributed to Bettman's decision to request that the Supreme Court, on rehearing *Euclid*, decide only the constitutionality of zoning in "principle," and not the "reasonableness" or "arbitrariness" of "that detail" of the case which placed Ambler's land in a residential rather than an industrial zone (Mandelker and Cunningham 1990:73). It was on this basis that *Euclid* was reheard.

Metzenbaum was persistent. In spite of the federal court decision against him, he set about to retry the case in the Supreme Court. His approach was to emphasize "the philosophy of zoning;" the basic question of the case was, in his view, the "abstract validity" of zoning (Brooks 1989:12):

. . . the issue is really freed from the question of the reasonableness or unreasonableness of the particular restriction and the subject really narrows down to the sole and completely *legal and fundamental* question as to whether there is a *constitutional power* to enact such ordinances as the one in question –Metzenbaum (quoted in Brooks 1989:12).

Metzenbaum argued, as "factual" evidence for the principle of zoning, that zoning would increase values and safety; it would prevent "huddling and the indiscriminate throwing together of homes and factories and stores" and intrusions which tend to steal "neighbor's values" (Brooks 1989:12).

Stating Ambler's case, Baker conceded that municipalities have the power to regulate the height of buildings, the area of occupation, the strength of building materials, methods of construction, density of use, and

may divide the municipality into zones. However, a municipality may not use the police power to:

. . . arbitrarily divert property from its appropriate and most economical uses or diminish its value by imposing restriction which have no other basis than the momentary taste of the public authorities. Nor can police regulations be used to effect the arbitrary desire to have a municipality resist the operation of economic laws and remain rural, exclusive and aesthetic, when its land is needed to be otherwise developed by that larger public good and public welfare, which takes into consideration the extent to which the prosperity of the country depends upon the economic development of its business and industrial enterprises—Baker (quoted in Brooks 1989:13).

Baker's approach was inductive rather than deductive. He stressed the particulars of the Euclid ordinance as it affected his client's property. The Euclid ordinance was based upon the "erroneous assumption" that the village could use the police power to regulate private property "in the interest of entirely fanciful or fantastic social or aesthetic grounds" (quoted in Brooks 1989:14). As such, the general purpose of the ordinance was "inadmissible;" therefore, the appellee could not be required to "make the enormous contribution out of his property to its accomplishment" (Brooks 1989:14). Over and over again, Baker would return to the dangers of the arbitrary nature of the ordinance:

It is not the power merely to negative dangerous or anti-social uses, but the power affirmatively to select among admittedly harmless uses those which the political power deems the most popular and to prohibit all others. We do not believe this power exists.

To assume that the Council of the Village of Euclid, or any other village is able to measure, prophetically, the surging and receding tides by which land shall be developed and the

amount necessary for each separate use, in a complicated classification, is to assume a degree of wisdom which not only does not exist in municipal councils but does not exist anywhere.

Yet the theory of zoning, in its ampler definitions, assumes that the municipal councils will be able to do, comprehensively, what private owners, most interested, have found it difficult to do, even on a small scale. Thus to subdivide a municipality, to classify it and crystallize restrictions into laws, is to embed a fly in amber. . . . Around such an ordinance there come to be interests which feel themselves vested and changes in the ordinance, to respond to new needs, have to be made against the protest of those who have come to rely upon arbitrary artificial restrictions rather than to feel themselves subject to the operation of general economic and social laws, which they can measurably foresee and discount—Baker (quoted in Brooks 1989:14).

At the heart of his argument were the Spencerian notions of "natural laws" and liberty: "That our cities should be made beautiful and orderly is, of course, in the highest degree desirable, but it is even more important that our people should remain free" (quoted in Brooks 1989:14).

After the *Euclid* case was argued the first time, a majority of the Justices were evidently in favor of holding the Euclid zoning ordinance unconstitutional (Mandelker and Cunningham 1990:72). This is not surprising given the strength of Baker's arguments, the weakness of the Euclid ordinance, and the Spencerian, laissez-faire leanings of the Justices. Justice Sutherland was supposedly writing such a decision when he became convinced by his consenting brethren to rehear the case. This time the court had been asked by Bettman to decide the case in principle alone. This time in response to the argument that zoning had an enormous potential to distort the "socially efficient use" of metropolitan land as well as the potential for corruption in the decision-making process, Bettman

argued that the "science" of land use planning, represented in municipal plans, would lay the basis for "objective," "disinterested" decisions that would promote economically efficient and environmentally attractive use of the land (Nelson 1989:303). "Objective science" would protect zoning against accusations that it was arbitrary and as such unconstitutional.

The fact that the case was heard on different terms plus Sutherland's new understanding that such regulation was within the realm of Spencerian principles led to the Court's final decision declaring zoning to be constitutional. Given this seemingly unlikely turn around, it is informative to look at the specific language of Sutherland's opinion:

Building zone laws are of modern origin. They began in this country about twenty-five years ago. Until recent years, urban life was comparatively simple; but with the 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. . . . Such regulations are sustained, under the complex conditions of our day, for reasons analogous to those which justify traffic regulations, which, before the advent of automobiles and rapid transit street railways, would have been condemned as fatally arbitrary and unreasonable. And in this there is no inconsistency, for while the meaning of constitutional guaranties never varies, the scope of their application must expand or contract to meet the new and different conditions which are constantly coming within the field of their operation—*Village of Euclid v. Ambler Realty Co.* (Mandelker and Cunningham 1990:68).

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. . . . the law of nuisances, likewise may be consulted, not for the purpose of controlling, but for the

helpful aid of its analogies in the process of ascertaining the scope of, the power. Thus the question whether the power exists to forbid the erection of a building of a particular kind or for a particular use, like the question whether a particular thing is a nuisance, is to be determined, not by an abstract consideration of the building or of the thing considered apart, but by considering it in connection with the circumstances and the locality. A nuisance may be merely a right thing in the wrong place . . . –*Village of Euclid v. Ambler Realty Co.* (Mandelker and Cunningham 1990:68).

The serious question in the case arises over the provisions of the ordinance excluding from residential districts, apartment houses, business houses, retail stores and shops, and other like establishments. This question involves the validity of what is really the crux of the more recent zoning legislation, namely, the creation and maintenance of residential districts, from which business and trade of every sort, including hotels and apartment houses, are excluded. . . . The decisions of the state courts are numerous and conflicting; but those which broadly sustain the power greatly outnumber those which deny altogether or narrowly limit; and it is very apparent that there is a constantly increasing tendency in the direction of the broader view. . . –*Village of Euclid v. Ambler Realty Co.* (Mandelker and Cunningham 1990:69).

The decisions enumerated in the first group cited above agree that the exclusion of buildings devoted to business, trade, etc., from residential districts, bears a rational relation to the health and safety of the community –*Village of Euclid v. Ambler Realty Co.* (Mandelker and Cunningham 1990:69).

The matter of 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. These reports, which bear every evidence of painstaking consideration, concur in the view that the segregation of residential, business, and industrial buildings will make it easier to provide fire apparatus suitable for the character and intensity of the development in each section; that it will increase the safety and security of home life; greatly tend to

prevent street accidents, especially to children, etc.—*Village of Euclid v. Ambler Realty Co.* (Mandelker and Cunningham 1990:70).

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—*Village of Euclid v. Ambler Realty Co.* (Mandelker and Cunningham 1990:70).

Sutherland's singling out apartment houses, referring to them "parasites" that feed on the amenities of single-family neighborhoods, was a reflection of an accepted attitude, supposedly supported by scientific investigation. As "waves of immigrants washed up on the doorsteps of the cities, they often lapped at the edges of established neighborhoods" (Abeles 1989:127). One solution to this "problem" was to create residential districts where it would be impossible to introduce immigrant housing (Abeles 1989:127)—in other words, apartments.

If these reasons, thus summarized, do not demonstrate the wisdom or sound policy in all respects of those restrictions which we have indicated as pertinent to the inquiry, at least, the reasons are sufficiently cogent to preclude us from saying, as it must be said before the ordinance can be declared unconstitutional, that such provisions are clearly arbitrary and unreasonable, having no substantial relation to the public health, safety, morals, or general welfare—*Village of Euclid v. Ambler Realty Co.* (Mandelker and Cunningham 1990:70).

Thus Sutherland was able to justify zoning based upon an acceptable Spencerian principle—the necessity of the state due to the problems caused

by increased population. Sutherland came to believe that zoning was not the "deprivation of property," rather zoning would enhance it (Pascal 1951:126). Zoning was a new property right institution that was a response to the new economic and environmental circumstances of the day (Nelson 1989:303). The creation of fixed zones, based on scientific study and analysis, could be justified as an evolutionary step forward in nuisance law (Nelson 1989:303). Looking to the national trend in the lower courts as well as the opinions of "experts," Sutherland was able to say that zoning, in principle, did have a substantial relationship to the public's health, safety, morals, and general welfare and that it could not be said that the Euclid ordinance lacked that relationship:

Under these circumstances, therefore, it is enough for us to determine, as we do, that the ordinance in its general scope and dominant features, so far as its provisions are here involved, is a valid exercise of authority, leaving other provisions to be dealt with as cases arise directly involving them—*Village of Euclid v. Ambler Realty Co.* (Mandelker and Cunningham 1990:71).

Sutherland did not leave the opinion without, however, making sure that it was understood that it had been written in regard to zoning in principle only.

It is true that when, if ever, the provisions set forth in the ordinance in tedious and minute detail, come to be concretely applied to particular premises, including those of the appellee, or to particular conditions, or to be considered in connection with specific complaints, some of them, or even many of them, may be found to be clearly arbitrary and unreasonable—*Village of Euclid v. Ambler Realty Co.* (Mandelker and Cunningham 1990:70).

Despite Sutherland's lengthy discussion of the importance of location to the appropriateness of the various land uses, the plaintiff

managed to steer the Court away from the constitutionality of the particular applications in this case. Thus in *Village of Euclid v. Ambler Realty Co.*, based on a deeply flawed and admittedly arbitrary ordinance, American zoning was legitimized. Given the pervasive atmosphere of laissez-faire, before zoning could legally take on its regulatory role, it was necessary for the advocates of zoning to reassure the Court and landowners that the proposed zoning was "right" (Abeles 1989:127). "Since planning and zoning were simply part of the emerging new order of a scientific world, the results would be fair and accurate" (Abeles 1989:127). And yet in the case of Euclid, there had been no comprehensive plan, little in the way of preparatory studies, and no scientific analysis to provide an underlying rationale for the drawing of particular district boundaries (Brooks 1989:23).

Today, on Ambler's 68 acres—adjacent to Euclid Avenue and extending to the tracks of the Nickel Plate Railroad—sits The Inland Plant of the General Motors Corporation (Brooks 1989:23).

APPENDIX B

BEGEMANN TABLES

What follows are the tables from the Begemann Report (1918) which should be used in conjunction with the analysis of that report in Chapter III.

TABLES I-XXV: FROM THE BEGEMANN REPORT (1918)

Table I Flats [Proof of Invasion]				
	Flats built prior to dwelling adjoining	Flats built same year as dwelling adjoining	Flats built later than dwellings adjoining	
Number	16	20	83	
Percent	13%	17%	70%	

Table II Flats [Adjacent lots]				
Available lots for building at time first flat was built.		Lots utilized for:		
		Dwellings	Flats	Other uses
Number	92	20	9	4
Percent	100%	22%	10%	4%
				Vacant Lots
				59
				64%

Table III: BEGEMANN REPORT

Flats

[Lots in half block facing and half block containing invading building]

Available lots for building at time first flat was built.		Lots utilized for:		Vacant Lots
Number	Percent	Dwellings	Flats	
270	100%	79	20	167
		29%	7%	64%
			Other uses	
			4	1%

Table IV: BEGEMANN REPORT

Flats

[Lots in half block to rear of invading building]

Available lots for building at time first flat was built.		Dwellings	Lots utilized for:		Vacant Lots
Number	Percent		Flats	Other uses	
172	100%	48	10	2	112
		27%	17%	1%	55%

Table V: BEGEMANN REPORT
Apartments
[Proof of invasion]

Apartments built prior to dwellings adjoining.		Apartments built the same year as dwellings adjoining.		Apartments built later	
than dwellings adjoining.					
Number	1		1		14
Percent	6%		6%		88%

Table VI: BEGEMANN REPORT
Apartments
[Adjacent lots]

Available lots for building at time first apartment was built.		Lots utilized for:		Vac. Lots	
		Dwellings	Apartments	Other uses	
Number	13	2	2	1	8
Percent	100%	15%	15%	7%	63%

Table VII: BEGEMANN REPORT
 Apartments
 [Lots in half block facing and half block containing invading building]

	Available lots for building at time first apartment was built.	Lots utilized for:			Vac. Lots
		Dwellings	Apartments	Other uses	
Number	60	15	2	0	43
Percent	100%	25%	3%	0%	72%

Table VIII: BEGEMANN REPORT
 Apartments
 [Lots in half block to rear of invading building]

	Available lots for building at time first apartment was built.	Lots utilized for:			Vac. Lots
		Dwellings	Apartments	Other uses	
Number	22	4	0	0	18
Percent	100%	18%	0%	0%	82%

Table IX: BEGEMANN REPORT

		Stores	
Total stores in district		Stores in local trading centers	Stores outside of local trading centers.
Occupied:			
Number	87	73	14
Percent	100%	84%	16%
Unoccupied:			
Number	40	25	24
Percent	100%	51%	49%
Totals			
Number	136*	98	38
Percent	100%	72%	28%

*from the original

Table X: BEGEMANN REPORT

		Stores	
		[Proof of Invasion]	
Stores built prior to dwelling adjoining		Stores built same year as dwelling adjoining	Stores built later than dwellings adjoining
Number	4	1	8
Percent	31%	7%	62%

Table XI: BEGEMANN REPORT

Stores [Adjacent lots]				
Available lots for building at time first store was built.		Dwellings		Lots utilized for: Buildings of other classes Vacant Lots
Number	22	5	0	17
Percent	100%	23%	0%	77%

Table XII: BEGEMANN REPORT

Stores [Lots in half block facing and half block containing invading building]				
Available lots for building at time first store was built.		Dwellings		Lots utilized for: Buildings of other classes Vacant Lots
Number	95	39	8	47
Percent	100%	41%	8%	51%

Table XIII: BEGEMANN REPORT

Stores

[Lots in half block to rear of invading building]

Available lots for building at time first store was built.		Lots utilized for:		Vacant Lots
		Dwellings	Buildings of other classes	
Number	64	32	4	27
Percent	100%	50%	6%	44%

Table XIV: BEGEMANN REPORT

Unobjectionable Industries

[Proof of Invasion]

Unobjectionable industries built prior to dwellings adjoining		Unobjectionable industries built same year as dwellings adjoining		Unobjectionable industries built later than dwelling adjoining
Number	Percent			
3	17%	0	0%	24
				83%

Table XV: BEGEMANN REPORT
Unobjectionable Industries
[Adjacent lots]

Available lots for building at time first unobjectionable industry was built.		Lots utilized for:		
		Dwellings	Buildings of other classes	Vacant Lots
Number	31	5	4	22
Percent	100%	16%	13%	71%

Table XVI: BEGEMANN REPORT
Unobjectionable Industries
[Lots in half block facing and half block containing invading building]

Available lots for building at time first unobjectionable industry was built.		Lots utilized for:		
		Dwellings	Buildings of other classes	Vacant Lots
Number	109	20	5	84
Percent	100%	18%	5%	77%

Table XVII: BEGEMANN REPORT
Unobjectionable Industries
[Lots in half block to rear of invading building]

Available lots for building at time first unobjectionable industry was built.		Lots utilized for:		
		Dwellings	Buildings of other classes	Vacant Lots
Number	26	3	4	19
Percent	100%	12%	15%	73%

Table XVIII: BEGEMANN REPORT
Objectionable Industries
[Proof of Invasion]

Objectionable industries built prior to dwellings adjoining		Objectionable industries built same year as dwellings adjoining		Objectionable industries built later than dwellings adjoining	
Number	2	0	3		
Percent	40%	0%	60%		

Table XIX: BEGEMANN REPORT
Objectionable Industries
[Adjacent lots]

Available lots for building at time first objectionable industry was built.		Lots utilized for:	
		Dwellings	Buildings of other classes
Number	16	3	2
Percent	100%	19%	12%
			Vacant Lots
			11
			69%

Table XX: BEGEMANN REPORT
Objectionable Industries
[Lots in half block facing and half block containing invading building]

Available lots for building at time first objectionable industry was built.		Lots utilized for:	
		Dwellings	Buildings of other classes
Number	59	33	3
Percent	100%	56%	5%
			Vacant Lots
			23
			39%

Table XXI: BEGEMANN REPORT
Objectionable Industries
[Lots in half block to rear of invading building]

	Available lots for building at time first objectionable industry was built.		Lots utilized for:	
	Number	Percent	Dwellings	Vacant Lots
	26		18	8
	100%		69%	31%

Table XXII: BEGEMANN REPORT

Class	Percent built prior to dwellings adjoining	Percent built same year as dwellings adjoining	Percent built later than dwellings adjoining
Flats	13	17	70
Apartments	6	6	88
Stores	31	7	62
Unobjectionable Industries	17	0	83
Objectionable Industries	40	0	60

Table XXIII: BEGEMANN REPORT
Percentage of available lots which were utilized for dwellings:

Inverting Class	Adjacent to the first invading building	In half block facing and half block containing first invading building	In half block to the rear of invading building	Variation
Flats	22	29	27	7
Apartments	15	25	18	10
Stores	23	41	50	27
Unobjectionable Industries	16	18	12	6
Objectionable Industries	<u>19</u>	<u>56</u>	<u>69</u>	50
Average	19	33.8	35.2	

Table XXIV: BEGEMANN REPORT
 Percentage of available lots which were utilized for buildings
 other than dwellings:

Inverting Class	Adjacent to the first invading building	In half block facing and half block containing first invading building	In half block to the rear of invading building
Flats	14	8	18
Apartments	22	3	0
Stores	0	8	6
Unobjectionable Industries	25	12	15
Objectionable Industries	<u>12</u>	<u>5</u>	<u>0</u>
Average	14.6	7.2	7.8

Table XXV: BEGEMANN REPORT
Percentage of vacant lots:

Invading Class	Adjacent to the first invading building	In half block facing and half block containing first invading building	In half block to the rear of invading building
Flats	64	64	65
Apartments	63	72	82
Stores	77	51	44
Unobjectionable Industries	75	78	70
Objectionable Industries	69	39	31
Average	63.6	60.8	58.2

APPENDIX C

ZONING AS POLITICAL PROCESS

Cheney clearly understood that the adoption of a zoning ordinance was a political process. During the years 1919 and 1920, he had several articles published about the Portland ordinance in both the local and national press in venues such as the *Oregonian*, the *Journal*, *Municipal Journal & Public Works*, and *Community Leadership*. The *Oregonian*, *Telegram*, and *Journal* routinely wrote articles and editorials favorable to zoning and Cheney during most of 1919. Cheney keenly understood the importance of building a constituency among the power brokers of the city especially since he had assumed that the process for adoption would be the passage of the ordinance by the city council. Nationally, the tension between private property rights and public control had been a key issue for zoning advocates. They knew that the constitutionality of zoning—because it relied on the police power—depended upon a delicate balance between public and private concerns. Cheney had been an active participant in the national discussion and recognized not only the importance of modern methods and science to planning but that citizen participation at some level would be critical to the passage of the ordinance.

Cheney included citizens in his "steps necessary in zoning Portland." They, or at least some of them, were to be consulted as to district boundaries and regulations, and numerous public hearings were to

be held at various points during the process. His success with the elite, especially those who were selected to be on the neighborhood committees, was unquestionable:

Hearty and enthusiastic endorsement of the zoning system for the entire city has been given by the prominent property owners who have served on these committees. That all work of the commission up to the present time will be wasted if the zoning system is not adopted is the opinion of J. F. Fisher, secretary of the organization and an employee of the department of public works under whose supervision the commission's work is done.

'Zoning is an absolute necessity. Not only for the future development of the city but to protect property values,' said Frederick H. Strong, secretary and treasurer of the Ladd Estate company, and member of the committee of five that zoned the Ladd addition and neighborhood.

Joseph Prudhomme, of Chausse-Prudhomme company, declared it would be money well spent. The work done in his district, the Richmond, has proved a great success and shows the necessity for zoning the entire city, he said.

'The zoning system keeps business in its proper location and bounds, thus protecting residence property,' said John McCourt, formerly U. S. district attorney, who served with the committee which zoned the Broadway district between East Eleventh and East Sixteenth. 'It will prevent misplaced garages and other nuisances in residence sections. It is a splendid idea and has my vote,' Dr. C. C. Newcastel had the same views.

That the system will stabilize property values and will help the 'own your own home' movement was the opinion of A. I. Fraley, auditor of the Northwestern National bank. 'Those contemplating the purchase of lots and the building of a home will be reassured if they knew the section chosen will remain a residence district,' he said (*Telegram* 1919:April 25).

Given the radical nature of zoning and its potential impact on property owners, it is not surprising that opposition developed over time in spite of Cheney's efforts. By the end of July 1919, attacks began to be mounted publicly not only against the ordinance but against Cheney himself. An article published on July 29th in the *News* criticized Cheney, his apparent elitism, his rate of pay, as well as the cronyism of the mayor:

Tho the city water plant is valued at more than \$20,000,000 and the responsibilities of the engineer at the head of it are such as exact 16 hours of work a day on occasions, he gets less than \$4000 a year, while the city pays Charles Henry Cheney \$500 a month for playing golf or sipping tea at the Arlington club.

Charles Henry is a dapper dandified little gentleman with an uncanny mastery of the subtle art of gab.

He used this gift to such good advantage that his warm admirer, our own Garrulous George [Mayor Baker], fixed up a nice, soft job for him. The mayor told the council it was absolutely necessary that Cheney be given the job in order to make Portland a 'Big Town.'

Those who have seen Charles Henry at all in the past few months say he is a hard worker on the golf links (*News* 1919:July 29).

Such attacks may well have come from a fundamental misunderstanding of what zoning was all about. Cheney's earlier industrial survey indicated a fair amount of confusion over what zoning meant. The *News* article continued:

The contract says Cheney shall give advice to the city planning commission on how to build houses, lay out streets, regulate traffic, sanitation, shipping and transportation facilities and to obtain proper service from public utilities. He is further permitted by the contract to show how arc lights

should be lighted, parks constructed and golf links turfed. In fact, he is supposed to do a hundred other things if he wants to. His territory comprises not only Portland, but all territory 'within six miles of the city limits.' This last clause explains why so much of Cheney's time is spent on the out-of-town golf links—perhaps (*News* 1919:July 29).

By and large the neighborhood committees were made up of an elite who were willing to immerse themselves in Cheney's ideas and saw themselves as taking part in an important moment in Portland's history. Since Cheney drew the preliminary district boundaries, in many cases, it is probable that his plans were essentially rubber-stamped by the committees. In any case, opposition mounted over the months. In an effort to diffuse the growing criticism among realtors, Cheney published an article in the Sunday, August 31st edition of the *Journal* in which he targeted the interests of real estate agents and even played on their fears:

Suspicion of real estate as an investment has prevailed pretty generally in the public mind ever since the panic of 1907. . . . Many agents in different cities have told me of having the following experience and it is probably well nigh universal: An agent sells an investor a piece of income-bearing property in a seemingly good location. Next month or next year the adjoining property is acquired by a new owner who erects an undertaking parlor, laundry, public garage, or an overhigh building which cuts off the light and air adjoining, thereby depreciating the rental return of the first investor and of a number of adjacent properties. The real estate agent is then blamed, and most unjustly, for having advised the first purchase (Cheney 1919d:August 31).

The problem was that without regulations to prevent undesirable uses from invading blocks occupied by "good" residences, "good" apartments, and "good" income bearing properties, the above situation would continue to be the norm and realtors would continue to be

"unjustly" blamed (Cheney 1919d:August 31). Cheney pointed out that because of this, realtors across the country were beginning to promote such regulations:

Thoughtful and progressive real estate men in the different parts of the continent have already so far appreciated the unfairness of the situation and sensed the changed spirit of the times that they are now giving close attention and importance to the establishment of municipal regulations, buildings codes, housing codes, zoning ordinances and sensible city planning that will give real protection to both the real estate man and the investor (Cheney 1919d:August 31).

In practice, the benefits of zoning seemed less clear. The day after the publication of Cheney's article, the city council assured the United States Baking Company that a permit would be issued allowing a \$100,000 addition to its building at East 11th and Everett. Cheney had recommended against granting the permit and this was clearly a defeat for him. The United States Baking Company had already made a substantial investment at the site in its original \$175,000 building; the addition was seen by the Chamber of Commerce and the East Side Business Men's club as a vote of confidence in the community which Portland could not afford to ignore. Evidently, the addition did not conform to Cheney's zoning scheme. Perhaps sensing growing conflict over his recommendations, he decided to withdraw his opposition. Moreover, the press was beginning to be less favorable. In an article in the *Telegram* headlined, "City Ignores Cheney Report: Council Tells Baking Company Permit for Building Will Be Issued; Consultant is Held Good Golf Player" (August 1), it was reported that city hall was no longer so enamored of "Mr. Cheney:"

This is the third recent occasion upon which the council has reversed the stand of Cheney and the commission. Sharp criticism of Cheney is growing at the city hall. This young man, in his capacity as advisor to the commission, is drawing \$500 a month from the city and working but two weeks a month under a contract. The rest of his time is said to be devoted to planning work in California cities (*Telegram* 1919:August 1).

As the year progressed, the newspapers were used by the proponents of zoning in an attempt to educate and persuade the public. Pro-zoning arguments including articles by Cheney, planning commissioners J. P. Newell, A. E. Doyle and J. C. Ainsworth, and assessor Henry E. Reed filled the newspapers while the opposing forces, led by the Real Estate Board, gathered momentum. A resolution was unanimously adopted by the board in January which opposed the proposed ordinance because it "would not be for the best interests of the majority of the people" (*Oregonian* 1920:January 10). Moreover, the board claimed that the opposition appeared to be relatively insignificant only because it had not yet been organized. The *Oregonian* and the *Telegram* once again came to zoning's defense calling the realtors a "tribe of self-servers" and "narrow-minded clans to whom civic loyalty means nothing more than the personal opportunity to inflate their pocketbooks" (*Telegram* 1920:January 14). From the realtors' point of view, the press was biased:

We . . . feel that the entire question has been handled by the papers from the standpoint of those favorable to zoning, rather than from an open, frank discussion of the merits of the case, and we feel that The *Telegram* and other papers should get first-hand information from the different cities of the United States, from those which adopted the zoning plan, and also the names of the cities that had refused to adopt the plan and their reasons for such action (*Telegram* 1920:January 23).

Much of the concern on the part of the realtors revolved around what they considered "wrongly" placed district boundaries. If the ordinance were adopted, easy amendment would be essential. The Realty Board's reading of the ordinance indicated that amendment, although possible, would be difficult and time-consuming. The meaning of the word "district" in the ordinance came into question in relation to this issue. The board defined "district" as such territory as reported on by the various neighborhood committees. This meant that amendment would require the notification and consent of a very large number of people (*Telegram* 1920:January 23). It is true that the word "district" was used in a number of ways—a neighborhood, formal and informal; an informal "use" area; a legally defined zone—by Cheney and his supporters, intentionally or not, which was bound to produce confusion. Newell himself had reported to the *Telegram* in January that "already" 180 petitions had been received for amendments to the proposed ordinance regarding district boundaries (*Telegram* 1920:January 23). The Realty Board's suggestion regarding the whole zoning question was to put it before the people and not just the city council:

If this proposed zoning ordinance is going to be such a blessing to the city, why would it not be a wise thing and the most satisfactory plan for the commission to recommend that this measure be placed on the ballot to be voted on by the people? (*Telegram* 1920:January 23).

Just days before the council vote on the issue, public support seemed to have dwindled significantly. Commissioner Barbur refused to reveal to the press how he would vote saying that he believed that the public generally didn't yet understand the ordinance and that a campaign of

education should be conducted (*Oregonian* 1920:February 28). On the same day, planning commissioner Ainsworth made another pitch in the *Journal* for the ordinance stressing its importance in reinforcing the natural forces which would produce stable property values and avoid the destruction of the city:

The city of Portland undoubtedly has a right to direct future development in accord with a well considered plan and I believe it ought to exercise it immediately. If it does not do so, it is failing to protect itself and property values as well. Its present policy of allowing every owner of real estate to do as he pleases with his own is a policy of self-destruction. . . . While there are in Portland strong social and economic forces tending to a certain degree of order and segregation of building development, it is apparent that the natural forces are not strong enough to prevent haphazard development or to insure the building of the city in a stable and orderly manner (Ainsworth 1920:February 28).

Mayor Baker was joined by Commissioners Barbur and Bigelow on March 17th to pass the zoning ordinance in a 3 to 2 vote. On March 19th, the *Telegram* predicted:

. . . when the ordinance is in force and we begin on the working out of its practical provision, much of the opposition to it at this time, which is based upon misconception and misinformation, will vanish (*Telegram* 1920:March 19).

Shortly after the council vote, the Citizens' Anti-Zoning League was organized by "over fifty property owners and representatives of almost every business and residence section in Portland" (*Telegram* 1920:March 24). Their purpose, believing that the citizens were not in favor of the ordinance, was to initiate a referendum on the passed ordinance on the grounds that it was "discriminatory" and that it would eliminate all businesses and garages from all residence districts, and that it would tend

to reduce building, especially apartment houses, which would drive up rents (*Telegram* 1920:March 24). A. Bonham, of Montivilla, told a meeting of the league that he had collected 256 signatures in just a few hours to a remonstrance against the ordinance (*Telegram* 1920:March 24). Former U.S. Senator Fred W. Mulkey, who was elected president of the league perhaps best expressed the sentiments of the league's membership when he stated shortly after the council's vote that:

The zoning ordinance is the most vicious instance of discrimination in favor of the wealthy property owner and against the small property and home owner that has been attempted in Portland for many years. The citizens will simply sweep the ordinance into the Willamette River (*Telegram* 1920:March 24).

The council repealed their vote on March 31st pending the outcome of a November referendum. After the winter of 1919/1920 debates, the fall campaign raised no new issues (Abbott 1983:85). However, waiting until the November elections proved to be a tactical error on the part of zoning advocates as this allowed time for the league to gather support. On November 2nd, the code was narrowly defeated by 219 votes—40 percent of registered voters turned out with 30,631 voting for and 30,850 voting against the ordinance (Abbott 1983:85) (MacColl 1979:300). At the time of the defeat of Cheney's ordinance, only New York and St. Louis had adopted comprehensive zoning codes.

APPENDIX D

INVASION MATRIX

Because it was not possible to reproduce all of the Sanborn maps used in the study, an abstraction was created to convey, in a very general sense, the relationships between the locations of the extant 1909 flats, residential conversions to flats as of 1924, and "new" flats as of 1924.

What follows is an "invasion matrix." The vertical cells represent the physical blocks in a north/south direction. The horizontal cells are subdivisions of those blocks indicating the incidence of 1909 flats, conversions, and new flats within that block. The cells are shaded and the number of flats indicated where they exist. Therefore, moving horizontally, one can see whether, for example, the existence of a 1909 flat has had any influence on the conversion or construction of other flats on a single block. Relationships between the blocks can be seen in a vertical direction.

The disadvantage of this scheme is that it is highly abstract. The actual physical relationships, as discussed by Begemann, cannot be shown in this scheme. Flats cannot be associated with a specific location on a block. However, it is striking that although there appears to be some clustering of flats, so few of them were actually built over 15 years of relatively intense development activity for the city.

INVASION MATRIX						
1909 EXTANT FLATS, CONVERSIONS, & NEW FLATS SINCE 1909						
INVASION OF FLATS BETWEEN 1909 AND 1924						
Source: Sanborn Maps for Portland, 1909 and 1924						
	1909 Extant	Conversions	New	1909 Extant	Conversions	New
	Grand-6th	Grand-6th	Grand-6th	6th-7th	6th-7th	6th-7th
Stark	0	0	0	0	0	0
Washington	1	0	0	0	0	0
Alder	0	0	0	0	0	0
Morrison	0	0	0	0	0	0
Belmont	0	0	0	0	1	0
Yamhill	0	0	0	0	1	0
Taylor	1	0	0	0	0	0
Salmon	0	0	0	0	0	0
Main	0	0	0	0	0	0
Madison	0	0	0	0	0	0
	1909 Extant	Conversions	New	1909 Extant	Conversions	New
	7th-8th	7th-8th	7th-8th	8th-9th	8th-9th	8th-9th
Stark	0	0	0	0	1	0
Washington	0	0	0	0	1	1
Alder	0	0	0	1	0	0
Morrison	0	0	0	0	0	0
Belmont	0	1	1	1	0	0
Yamhill	0	0	0	3	1	1
Taylor	0	0	0	0	0	0
Salmon	0	0	0	0	0	0
Main	0	0	0	0	0	0
Madison	0	0	0	0	0	0
	1909 Extant	Conversions	New	1909 Extant	Conversions	New
	9th-10th	9th-10th	9th-10th	10th-11th	10th-11th	10th-11th
Stark	0	0	0	0	2	0
Washington	0	3	0	0	0	0
Alder	0	2	0	0	0	0
Morrison	0	0	0	0	0	0
Belmont	0	0	0	0	0	0
Yamhill	0	0	0	0	0	0
Taylor	0	0	0	0	0	0
Salmon	0	0	0	0	0	0
Main	0	0	0	0	0	0
Madison	0	0	0	0	0	0
	1909 Extant	Conversions	New	1909 Extant	Conversions	New
	11th-12th	11th-12th	11th-12th	12th-13th	12th-13th	12th-13th
Stark	0	4	0	1	1	0
Washington	0	1	0	1	0	0
Alder	0	0	0	1	2	0
Morrison	0	0	0	0	0	0
Belmont	0	0	0	0	1	0
Yamhill	0	0	0	1	0	0
Taylor	0	0	0	1	0	0
Salmon	0	0	0	0	0	0
Main	0	0	0	0	0	1
Madison	0	0	0	1	0	1

1909 EXTANT FLATS, CONVERSIONS, & NEW FLATS SINCE 1909 INVASION OF FLATS BETWEEN 1909 AND 1924						
	1909 Extant 13th-14th	Conversions 13th-14th	New 13th-14th	1909 Extant 14th-15th	Conversions 14th-15th	New 14th-15th
Stark	0	0	0	0	0	0
Washington	0	0	0	1	1	0
Alder	0	4	1	1	2	0
Morrison	1	1	0	0	0	0
Belmont	1	2	0	2	0	0
Yamhill	0	0	2	0	1	0
Taylor	1	0	0	1	0	0
Salmon	2	1	1	1	0	1
Main	1	0	0	0	0	2
Madison	0	1	0	0	0	0
	1909 Extant 15th-16th	Conversions 15th-16th	New 15th-16th	1909 Extant 16th-17th	Conversions 16th-17th	New 16th-17th
Stark	1	1	0	0	1	0
Washington	0	1	0	1	1	0
Alder	3	2	1	1	2	0
Morrison	0	1	0	0	4	0
Belmont	2	0	0	0	1	2
Yamhill	2	0	0	0	0	0
Taylor	0	1	1	1	0	0
Salmon	0	0	0	0	0	2
Main	0	0	0	0	0	5
Madison	0	1	0	0	0	0
	1909 Extant 17th-18th	Conversions 17th-18th	New 17th-18th	1909 Extant 18th-19th	Conversions 18th-19th	New 18th-19th
Stark	0	1	0	0	0	1
Washington	1	1	0	0	0	2
Alder	1	1	1	0	2	2
Morrison	0	0	0	0	0	2
Belmont	1	0	1	0	0	0
Yamhill	0	0	0	0	0	0
Taylor	0	0	0	0	0	1
Salmon	0	0	0	0	0	1
Main	0	0	0	0	0	1
Madison	0	0	0	0	0	1
	1909 Extant 19th-20th	Conversions 19th-20th	New 19th-20th	1909 Extant 20th-21st	Conversions 20th-21st	New 20th-21st
Stark	0	2	0	0	0	0
Washington	0	1	0	0	0	0
Alder	0	1	0	0	0	0
Morrison	2	0	1	1	0	0
Belmont	0	0	0	1	0	0
Yamhill	0	0	0	0	0	0
Taylor	0	0	0	0	1	0
Salmon	0	0	0	0	2	0
Main	0	0	0	0	1	0
Madison	0	0	0	0	1	0

INVASION MATRIX						
1909 EXTANT FLATS, CONVERSIONS, & NEW FLATS SINCE 1909						
	1909 Extant 21st-22nd	Conversions 21st-22nd	New 21st-22nd	1909 Extant 22nd-23rd	Conversions 22nd-23rd	New 22nd-23rd
Stark	0	0	0	0	0	0
Washington	0	0	0	0	0	0
Alder	0	0	0	0	0	0
Morrison	0	0	0	0	0	0
Belmont	0	0	1	0	0	0
Yamhill	1	0	1	0	0	0
Taylor	0	0	0	0	2	0
Salmon	0	0	0	0	0	1
Main	0	0	0	0	0	0
Madison	0	0	0	0	0	0
	1909 Extant 23rd-24th	Conversions 23rd-24th	New 23rd-24th	1909 Extant 24th-25th	Conversions 24th-25th	New 24th-25th
Stark	0	0	0	0	0	0
Washington	0	0	0	0	0	0
Alder	0	0	0	0	0	0
Morrison	0	0	1	0	0	1
Belmont	0	0	1	1	0	1
Yamhill	0	0	0	0	0	0
Taylor	1	0	0	0	0	0
Salmon	1	0	0	1	0	1
Main	0	1	1	0	0	1
Madison	0	0	2	1	0	1
	1909 Extant 25th-26th	Conversions 25th-26th	New 25th-26th	1909 Extant 26th-27th	Conversions 26th-27th	New 26th-27th
Stark	0	0	0	0	1	0
Washington	0	0	0	0	0	0
Alder	0	0	0	0	0	0
Morrison	0	0	3	0	0	0
Belmont	0	0	3	1	0	1
Yamhill	0	0	0	0	0	0
Taylor	0	0	0	0	0	0
Salmon	0	0	0	0	0	0
Main	0	0	0	0	0	0
Madison	0	0	0	0	0	0
	1909 Extant 27th-28th	Conversions 27th-28th	New 27th-28th	1909 Extant 28th-29th	Conversions 28th-29th	New 28th-29th
Stark	0	0	0	0	0	0
Washington	0	1	0	0	0	0
Alder	0	2	0	0	0	0
Morrison	0	0	0	0	0	0
Belmont	0	0	1	0	0	1
Yamhill	0	0	0	0	0	0
Taylor	1	0	0	0	0	0
Salmon	0	0	0	0	0	0
Main	0	0	0	0	0	0
Madison	0	0	0	1	0	0

1909 EXTANT FLATS, CONVERSIONS, & NEW FLATS SINCE 1909						
INVASION OF FLATS BETWEEN 1909 AND 1924						
	1909 Extant 29th-30th	Conversions 29th-30th	New 29th-30th	1909 Extant 30th-31st	Conversions 30th-31st	New 30th-31st
Stark	0	0	0	0	0	0
Washington	0	0	1	0	0	0
Alder	0	0	0	0	0	0
Morrison	2	0	2	2	1	1
Belmont	0	0	0	0	0	0
Yamhill	0	0	0	1	1	0
Taylor	0	0	0	1	0	0
Salmon	0	0	0	0	1	0
Main	0	0	0	0	0	0
Madison	0	0	0	0	1	1
	1909 Extant 31st-32nd	Conversions 31st-32nd	New 31st-32nd	1909 Extant 32nd-33rd	Conversions 32nd-33rd	New 32nd-33rd
Stark	0	0	0	0	0	0
Washington	0	0	2	0	0	1
Alder	0	0	0	0	0	0
Morrison	0	0	1	0	1	0
Belmont	2	0	1	1	0	0
Yamhill	0	0	1	0	0	0
Taylor	0	0	0	0	0	1
Salmon	0	0	0	0	0	0
Main	1	0	0	0	0	0
Madison	0	0	1	0	0	0
	1909 Extant 33rd-34th	Conversions 33rd-34th	New 33rd-34th	1909 Extant 34th-35th	Conversions 34th-35th	New 34th-35th
Stark	0	1	0	0	0	0
Washington	0	1	0	0	0	0
Alder	0	0	0	0	1	1
Morrison	0	0	0	0	0	0
Belmont	0	0	0	0	0	0
Yamhill	0	0	0	0	0	0
Taylor	0	1	0	0	0	0
Salmon	0	0	0	0	0	0
Main	0	1	0	0	2	0
Madison	0	2	1	0	1	0
	1909 Extant 35th-36th	Conversions 35th-36th	New 35th-36th	1909 Extant 36th-37th	Conversions 36th-37th	New 36th-37th
Stark	0	0	0	0	0	0
Washington	0	0	0	0	1	0
Alder	0	0	0	0	0	0
Morrison	0	0	0	0	1	0
Belmont	0	0	0	1	1	2
Yamhill	0	0	1	0	0	1
Taylor	0	0	0	0	0	0
Salmon	0	0	0	0	0	0
Main	0	0	0	0	0	0
Madison	0	1	0	0	0	1

1909 EXTANT FLATS, CONVERSIONS, & NEW FLATS SINCE 1909						
INVASION OF FLATS BETWEEN 1909 AND 1924						
	1909 Extant 37th-38th	Conversions 37th-38th	New 37th-38th	1909 Extant 38th-39th	Conversions 38th-39th	New 38th-39th
Stark	0	0	0	0	0	0
Washington	0	0	0	0	0	0
Alder	0	0	0	0	0	0
Morrison	0	0	0	0	1	0
Belmont	0	0	0	0	0	0
Yamhill	0	0	0	0	0	0
Taylor	0	0	0	0	0	0
Salmon	0	0	0	0	0	0
Main	0	0	0	0	0	0
Madison	0	1	0	0	0	0
	1909 Extant 39th-40th	Conversions 39th-40th	New 39th-40th	1909 Extant 40th-41st	Conversions 40th-41st	New 40th-41st
Stark	0	0	0	0	0	0
Washington	0	0	0	0	0	0
Alder	0	0	0	0	0	0
Morrison	0	1	0	0	0	0
Belmont	0	0	0	0	1	0
Yamhill	0	0	0	0	0	0
Taylor	0	0	0	0	0	0
Salmon	0	0	0	0	0	0
Main	0	0	0	0	0	0
Madison	0	0	0	0	0	1
	1909 Extant 41st-42nd	Conversions 41st-42nd	New 41st-42nd	1909 Extant 42nd-43rd	Conversions 42nd-43rd	New 42nd-43rd
Stark	0	0	0	0	0	0
Washington	0	0	0	0	0	0
Alder	0	0	0	0	0	1
Morrison	0	0	0	0	0	0
Belmont	0	0	0	0	0	0
Yamhill	0	0	3	0	0	0
Taylor	0	0	0	0	0	0
Salmon	0	0	0	0	0	0
Main	0	0	0	0	0	0
Madison	0	0	0	0	0	0
	1909 Extant 43rd-44th	Conversions 43rd-44th	New 43rd-44th	1909 Extant 44th-45th	Conversions 44th-45th	New 44th-45th
Stark	0	0	0	0	0	0
Washington	0	0	0	0	1	0
Alder	0	0	0	0	0	0
Morrison	0	0	0	0	0	0
Belmont	0	0	0	0	0	0
Yamhill	0	0	0	0	0	0
Taylor	0	0	0	0	1	0
Salmon	0	0	0	0	0	0
Main	0	0	0	0	0	0
Madison	0	1	0	0	0	1

1909 EXTANT FLATS, CONVERSIONS, & NEW FLATS SINCE 1909 INVASION OF FLATS BETWEEN 1909 AND 1924						
	1909 Extant 45th-46th	Conversions 45th-46th	New 45th-46th	1909 Extant 46th-47th	Conversions 46th-47th	New 46th-47th
Stark	0	0	0	0	0	0
Washington	0	0	0	0	0	0
Alder	0	0	0	0	0	0
Morrison	0	0	0	0	0	0
Belmont	0	0	1	0	0	0
Yamhill	0	0	0	0	0	0
Taylor	0	1	0	0	0	0
Salmon	0	0	0	0	0	0
Main	0	0	0	0	0	0
Madison	0	1	0	0	0	1
	1909 Extant 47th-48th	Conversions 47th-48th	New 47th-48th	1909 Extant 48th-49th	Conversions 48th-49th	New 48th-49th
Stark	0	0	0	0	0	0
Washington	0	0	0	0	0	0
Alder	0	0	0	0	0	0
Morrison	0	0	0	0	0	0
Belmont	0	0	0	0	0	0
Yamhill	0	0	0	0	1	0
Taylor	0	0	0	0	0	0
Salmon	0	0	0	0	1	0
Main	0	0	0	0	0	0
Madison	0	0	0	0	0	0
	1909 Extant 49th-50th	Conversions 49th-50th	New 49th-50th	1909 Extant 50th-51st	Conversions 50th-51st	New 50th-51st
Stark	0	0	0	0	0	0
Washington	0	0	0	0	0	0
Alder	0	0	0	0	0	0
Morrison	0	0	0	0	0	0
Belmont	0	2	0	0	0	0
Yamhill	0	0	0	0	0	0
Taylor	0	1	0	0	0	0
Salmon	0	0	0	0	0	0
Main	0	0	0	0	0	0
Madison	0	0	0	0	0	0
	1909 Extant 51st-52nd	Conversions 51st-52nd	New 51st-52nd			
Stark	0	0	0			
Washington	0	0	0			
Alder	0	0	0			
Morrison	0	0	0			
Belmont	0	0	0			
Yamhill	0	0	0			
Taylor	0	0	0			
Salmon	0	0	0			
Main	0	0	0			
Madison	0	0	0			