

THE RESIDENTIAL PATTERNS OF CHICAGO IN 1940:

A STUDY OF THE BURGESS ZONAL HYPOTHESIS

BY

LILLIAN HELEN KUCSMA

~~DEPARTMENT OF GEOGRAPHY CENTRE
RESEARCH UNIT IN AMERICAN STUDIES
McMASTER UNIVERSITY
HAMILTON, ONTARIO~~

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ABSTRACT

The Burgess concentric zone model was assessed using census data for Chicago community areas in 1940. Burgess' model implies that the lower-income residents live in the center of the city while upper-income residents live on the periphery of the city. Using occupation as a determinant of socio-economic status, location quotients were calculated to determine patterns of residential differentiation. It was found that upper-income residents did indeed reside in the peripheral areas of the city, but they also lived near the central business district. The lakefront amenities were the primary reason for this residential pattern. Many low-income residents lived near the center of the city, but many were also found to live in the suburbs due to industrial decentralization. Thus, the lakefront amenities and the suburban industries are the primary causes of the distortion of the Burgess model. However, this distortion does not suggest the Burgess zonal hypothesis is inaccurate. The discrepancies may be attributable to the uneven growth of cities through the "filtering" process.

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1.0 SECTION ONE: INTRODUCTION

In the 1920's, the Chicago School had boasted of many scientists whose theories continue to be tested today. One such scientist was a sociologist named Ernest Watson Burgess. He developed a model for North American cities based on his own personal observation data and a series of case studies undertaken by graduate students that worked for him. Through the synthesis of immigration and migration data taken from these surveys and studies of cities, Burgess developed the concentric zone model. Census tract data did not exist at the time Burgess developed the model of concentric zones. So, since Burgess used qualitative data instead of quantitative data, the question that arises is whether or not this model would be verified if quantitative data were used. For this reason, a research paper illustrating the socio-economic residential patterns of Chicago in 1940 using quantitative data will be done.

The purpose of this paper is to examine Burgess' concentric zone model to see if it is an accurate representation of Chicago during the interwar period of 1920 to 1940. Very little residential construction went on in the 1930's, so the data for 1940 is a reasonably accurate guide to the pattern that had developed by the late 1920's. To date, research has not been done to examine if Burgess' model is an accurate representation of Chicago in the inter-war period.

Research will be done from a social geographic point of view where the social class of the residents in Chicago will be examined. To conduct this research, occupation will be used as an indicator of class. Since Chicago has been used as a basic model of the North American city in the past, this research will provide a better understanding of North American cities in the inter-war period of 1920-40. It is important to note that Chicago will be used as a case study and may not necessarily be representative of the residential patterns that existed in all North American cities during this period.

Burgess' model will be used as a source of organizing and summarizing information. It provides a framework that segregates different social classes in a specific pattern. It is important to study where people live in the city since where a person lives reflects their attitude, lifestyle, and the type of job that they do. Where people live is central to Burgess' argument. In general, Burgess' model argues that upper-class residents live on the periphery of the city while lower-class residents live in the center of the city.

Specifically, Burgess outlines the city as containing six different zones. The first zone is the central business district of a city which contains civic buildings, major retail stores, and businesses. The second zone is the fringe of the central business district,

containing wholesaling, truck and railroad depots. Next to it is the third zone known as the zone in transition where high-income residents used to live, but which now low-income residents reside. Also, businesses and light manufacturing have located here taking advantage of the cheap labour that live in this area. The fourth zone is the zone containing residents who have moved away from the zone of transition. These residents are primarily industrial workers who have upgraded their standard of living by buying their own homes. Upper-class residents owning large homes or living in high-income apartment buildings occupy zone five. Zone six is the outermost zone, known as the commuter's zone. This is where satellite cities of upper and middle-class residents live along rapid lines of transit or rail lines. (Yeates & Garner, 1980, p.200)

2.0 SECTION TWO: LITERATURE REVIEW

Different studies have been done to test the validity of Burgess' model of North American cities. Some of the studies done in the early part of this century will be reviewed. Other models such as a sector model of rents (Hoyt, 1939) and a multiple nuclei model (Harris and Ullman, 1945) view the growth of North American cities differently.

There have been two primary criticisms of the Burgess model of concentric zones: "(1) the ideal concentric pattern does not exist; (2) if there are severe distortions found when a city is studied than the value of the

hypothesis is lost even though there is a general tendency toward the ideal pattern." (Quinn, 1940, p.211) Some evidence in favour of Burgess' model and against it will be reviewed. Whether or not the model fits reality to some extent depends on the judgement of the researcher, the method, the data, and the techniques used to test the hypothesis. Thus far, there is no study that has definitely proven Burgess' model as a valid model or an invalid one. More research is needed and that is why this research paper is being endeavoured. This fact alone constitutes Burgess' model as an important theory to be considered.

2.1 Time As A Factor

A study done by Cressey (1938) in which the movements of cultural groups were measured between 1898-1930 revealed that as time went on the population in the center of the city decreased because people were moving outward. Immigrant groups were moving to the center of the city and as their economic status improved they moved outward. This occurrence is in keeping with Burgess' model which presupposes the process of "filtering" that must occur if the city is to reproduce the zonal pattern. Cressey also notes that in the period between 1898-1930 the housing stock deteriorated over time and so did the services provided for them, so the more affluent moved outward. He used data for census tracts in 1910, 1920 and 1930 as well as material from an 1898 census taken from the Chicago School and

created ten concentric mile zones radiating from the center of the city of Chicago. His general arguments corresponded to Burgess' arguments.

Davie (1937) did research testing ecological time-cost distance versus spatial linear distance to see if Burgess' model of concentric zones applied. Linear distance (allowance made for grid-street system) should be measured in feet (as Cressey did), miles or meters, while ecological distance (no allowance made for grid-street system) should be measured in terms of time and cost. (Quinn, 1940) Quinn examined both ecological and spatial zones by using a theoretical time-distance chart. He pointed out, that in principle, a rectangular spatial structure was consistent with circular time/cost structure. (Quinn, 1940, p.213) But, since it has not been proven that a circular/zonal ecological structure actually exists, the validity of Burgess' zonal hypothesis is still debatable.

Hunter (1974) examined the relationship over time between socio-economic status and family status using a stochastic model to determine the decentralization of local communities in Chicago between 1930-1960. He formulated two stages of community change over time in terms of socio-economic status and "the four empirically derived stages of change were then shown to be arranged in a clear concentric or zonal pattern." (Hunter, 1974, p.945) But, Hunter's study also showed the existence of low status districts at

the urban fringe. This contradicts Burgess' zonal hypothesis which implies that low status districts are found in the central city.

An important study done after the post-war period will be examined. Duncan and Duncan (1955) studied the relationship between spatial and social distances in metropolitan communities using an index of dissimilarity and segregation - an ecological analysis. It was found that there was "strong support for the proposition that spatial distances between occupational groups are closely related to social distances." (Duncan and Duncan, 1955, p.502) According to Burgess, one would expect the degree of residential decentralization of an occupational group to be inversely related to its socio-economic status. In this study the zonal hypothesis was supported, but there were significant distortions produced by peripheral industrial concentrations appearing in certain sectors. (Duncan and Duncan, 1955, p.500)

2.2 Distortions of the Zonal Model

American cities and their ecology were examined by Schmid (1950) between the time period of 1940-1960. Crude measures of the location of different socio-economic groups in the city and their distances from the city were used. Schmid concluded that "certain occupational groups tend to segregate in high-income areas, others in low-income areas." (Schmid, 1950, p.280) For example, he found that

professionals, managers, proprietors, and officials tend to segregate in high-rent areas. But, his findings seem to fit Hoyt's sector model of rent areas rather than Burgess' model. Also, Schmid's findings were vague: the high-rent areas in each city were not specified and too many crude variables were tested. Further, Schmid used 12 different indices and then later in his analysis pointed out that "in differentiating ecological areas in large cities one or at most a few selected indices may be much more valid than a large number of indices." (Schmid, 1950, p.281) Thus, the validity of his findings are questionable.

Davis (1952) used a cost-utility model in an attempt to describe the zonal pattern of Chicago in 1940. In an unpublished study, she found that people with different socio-economic status (using occupation as a determinant of socio-economic status) were segregated in different areas of the city. But, she noted "they [zones] do not, however, conform to the expectancy that there are particular zones allocated to particular occupational groups, such as the 'Zone of Workingmen's Homes' alluded to by Burgess." (Davis, 1952, p.1) Thus, Davis' study seems to dispute Burgess' model. However, Zorborough (1929) argued, "no city conforms to the ideal zonal pattern because of physical barriers but the city is broken up into smaller areas, natural areas which are unplanned, a natural consequence of city growth." (Zorborough, 1929, p.231) Burgess implies that zones are

"natural areas". (Burgess, 1925) The question is how far from the zonal pattern can these "natural areas" be before Burgess' hypothesis is not plausible?

In examining the suburban zone, Burgess would argue that the affluent would be living in this area. Chauncy Harris (1943) found that "of the 19 cities in the U.S. which had the highest percentage of their gainfully occupied workers in professional occupations, 16 were suburbs in metropolitan districts." (Harris, 1943, p.6) The high percentage of professional workers in the suburbs correlates with Burgess' hypothesis. But, Harris also shows the existence of many industrial suburbs in his study. As the city expands it has no where to go in the center so factories move out to the suburbs (cheaper land) and the more affluent residents move out to the suburbs seeking more space. (Woods and Kennedy, 1962) Also, blue-collar workers, following industry for jobs, move to the suburbs. In the earlier period of 1910 and 1920, there were industrial "satellite cities" of blue-collar workers. (Harris, 1988) This indicates that at one point in time blue-collar workers were present in a zone that was not designated to them in the model; therefore there is a discrepancy to the zonal pattern. Davie (1937) argues that heavy industry was not included in Burgess' zonal model. It is possible these industrial "satellite cities" contained heavy industry and this could account for the zonal discrepancy. If this is

true, then the Burgess model will have to be altered. Quinn notes that "since...the Burgess hypothesis presumably applies to modern American commercial-industrial cities...heavy industry should be treated as part of normal urban structure." (Quinn, 1940, p.215)

2.3 Future of the Zonal Hypothesis

It is clear that all of these studies have proven that Burgess' zonal hypothesis is a theory that deserves to be looked at in more detail. This research paper will provide empirical analysis of significance for a period that has been neglected.

3.0 SECTION THREE: METHODOLOGY

In order to test the hypothesis of whether or not Burgess' model is an accurate representation of Chicago during the inter-war period, data from the U.S. Census for Chicago in 1940 will be used (U.S. Bureau of the Census, 1940) The census contains many variables. The variable that will be assessed will be the occupation of the "head" of the household. These will include both men and women. In 1940, since women were not traditionally considered heads of households, only women in households in which there were no adult males were included in the Census. Then, the locations of six occupational groups will be plotted on a map to see if they form a pattern similiar to Burgess' concentric zone model. If they do not form a concentric pattern the research in this project will attempt to explain

the discrepancies of the pattern. Census data is chosen because it is the single best source of quantitative data available. The main weakness of this research paper is that the census tract data are only available in 1940, and not for the 1920's.

The statistical method that will be used to map the occupational groups is the calculation of location quotients. There will be six occupational groups mapped and they are: (1) managers; (2) professionals and semi-professionals; (3) craftsman and operatives; (4) clerical, sales, and service workers; (5) labourers; and (6) domestics. Location quotients indicate the areas of highest concentrations of a particular group studied. A value of less than one means the group is underrepresented, a value of one means the group's representation is the same as the city as a whole, and a value of anything over one means the group is overrepresented. A value of two or higher indicates a significant overrepresentation.

In addition, secondary literature written about Chicago during the inter-war period or about Burgess' model, if applicable, will be used to provide further insight on the class situation of those times. Secondary sources of information may bring a new perspective to the research or invoke new ideas that would otherwise be missed through sole empirical analysis.

4.0 SECTION FOUR: ANALYSIS

The basic assumption of Burgess' model is that those in upper-class occupations live on the periphery of the city while those in lower-class occupations live in or near the center of the city. To see if Burgess' model fits Chicago in the inter-war period, the residential patterns of both upper and lower-class occupational groups will be examined.

4.1 Managers, Professionals and Semi-Professionals

Upper and upper-middle-class workers will be examined through the occupational groups of managers, professionals and semi-professionals. (figs.1&2) Both of these upper and middle-class occupational groups will be coupled together since their maps of residence are almost identical.

A high concentration of managers, professionals, and semi-professionals were found living on the periphery (figs.1&2) According to Burgess' model, these occupational groups should be living on the periphery of the city. The main reason that these upper and upper-middle-class groups resided on the periphery was probably because of the suburban amenities. According to Gordon (1984), many fled to the suburbs to escape the "noise and confusion of the waterfront, the dirt, the stench, and the intolerably crowded conditions of the old city." (Gorden, 1984, p.36) In many cases this was true. For example, in Chicago's southwest periphery, a high concentration of managers,

professionals and semi-professionals were found. This corresponds to Burgess's model. The community areas of Ashburn (CA:70, where CA represents community area) and Auburn-Gresham (CA:71) were relatively new areas. (figs.1&2) They were stable areas with large lots, schools, and shopping centres. (Hoyt, 1939, p.70) Auburn was a business area so it probably employed many of the managers, professionals and semi-professionals in the area. The upper-class workers who worked in the central business district could afford to commute by auto or by the favourable transportation facilities available in the area.

Also, managers, professionals and semi-professionals were found in very high concentrations in the posh peripheral residential areas of Beverly (CT:72) and Morgan Park (CT:75). (figs.1&2) These were ideal suburbs that boasted "park-like surroundings - almost complete lack of smoke, noise, and overcrowding, with hills, valleys and winding roads." (Hoyt, 1939, p.73) It was observed, that "the professional and executive services required by the people and industries on the South Side [provided] the livelihood of a large number of men in these two occupational groups." (Hoyt, 1939, p.75) Clearly, those employed in upper and upper-middle-class occupations lived in choice suburban areas.

But, managers, professionals and semi-professionals were found to reside not only in suburban areas but in

community areas close to the center, especially along the lakefront. Some of the reasons those in upper and upper-middle-class occupations were attracted to the center of the city were most likely due to the lakefront amenities and historical inertia.

Some examples of the attraction of the lakefront amenities were found along the South Side shore. For example, high concentrations of managers, professionals and semi-professionals were found in South Shore (CT:43) which was made up of high grade apartments and single-family homes. (Hoyt, 1939, p.41) (figs.1&2) It was a prime residential area with the amenities of parks, shopping centers, and the central business district. This area would be equivalent to the zone of the workingmen's home, yet upper and upper-middle-class residents were found to live here.

To the north, the three community areas of Hyde Park (CA:41), Kenwood (CA:39), and Oakland (CA:36) housed a high concentration of managers, professionals, and semi-professionals in luxury apartment dwellings along the waterfront. (Figs.1&2) In these areas, movie theatres, amusements, hotels, and regional businesses, were also found. (Hoyt, 1939, p.38) According to Burgess' model this area would be known as the zone of transition which is made up of immigrants and should be a slum. The structures in this area were old, but this area was far from being a slum.

Further, near the center, contrary to Burgess' model, on the North Side and the Near North Side were high representations of managers, professionals and semi-professionals. An example is the community area of Lakeview (CA:6) which was chiefly a residential area containing 90% apartments with a median rental of \$37.46 per month. (Hoyt, 1939, p.11) (Figs.1&2) The closer to the center the lower the median rents of the community areas. Also, the rents decreased from the lakeshore apartments westward toward the industrial belt. (Hoyt, 1939, p.11) The managers, professionals and semi-professionals probably lived in the apartments along the lakeshore and enjoyed the amenities of the central business district.

Adjacent to the Loop (CBD) , managers, professionals, and semi-professionals were found to be represented in high concentrations in the community area of the Near North Side, also known as "the Gold Coast and the Slum". In the Near North Side were found "fashionable shops, hotels, prestige offices, and communications industries." (Mayer & Wade, 1969, p.302) This area would be termed the factory zone in Burgess' model. This fringe area of the central business district not only contains factories to the west, but also houses luxury apartments along the lakefront. As observed, "those that lived in apartments were 'confined largely to the well-to-do, [they] held out the promise of elegance and space of the old single-family

mansion in the new apartment environment.'" (Mayer & Wade, 1969, p.322) The lakefront apartments were the homes of the social elite able to pay extremely high rents of \$100 per month. (Hoyt, 1939, p.9) Many ethnic groups resided in this area and this would fit in with Burgess' argument that there must be continuous immigration at the central areas so that the "filtering" process can continue and reproduce the zonal pattern. In 1940, the Near North Side was congested with a population of 76,577. (Hoyt, 1939, p.10)

Furthermore, opposite to Burgess' model, a very high representation of managers, professionals and semi-professionals were found living right in the Loop most probably because of the historical inertia of the area. There were both high-rent areas and areas of affordable housing in the central business district. These high-rent areas remained affluent because of the inherent nature of the neighbourhood. This idea is in keeping with Hoyt's sectoral rent areas. (Hoyt, 1939) Those in well-established upper and upper-middle occupations probably lived in the more affluent neighbourhoods in the center. The closeness to jobs and all the amenities the central business district had to offer attracted white-collar groups to living in the center. An editorial in the Chicagoan in 1929 stated, "despite continued popularity of suburban life, a large class of city dwellers entertain residential ambitions...they hope to live within walking distance of

their downtown offices." (Mayer & Wade, 1969, p.323)

In sum, it was found that both managers, professionals, and semi-professionals were found both in peripheral areas and in central areas of the city. Those that lived in the peripheral areas were probably established upper and upper-middle-class workers with families. And, the majority of upper and upper-middle-class workers living near the center were probably beginning their careers and single. In both cases, they were most likely males and native whites.

4.2 Craftsmen and Operatives

The next occupational groups that will be examined are skilled (craftsman) and semi-skilled (operatives) blue-collar workers. (See fig.3) In Burgess' model they would be expected to reside in the zone of the workingmen's homes. In other words, they would be found in the middle of the city between the central areas and the peripheral areas.

The middle areas of Chicago indeed showed a high to very high overrepresentation of craftsmen and operatives. Practically all locations on the lakefront (north and south) near the center showed an underrepresentation of craftsmen and operatives. This is in keeping with Burgess' model.

These middle community areas of Chicago were old communities that were homes to immigrants employed in industry and manufacturing located in the area. Housing was old, but favourable. Community areas in the NorthWest Side

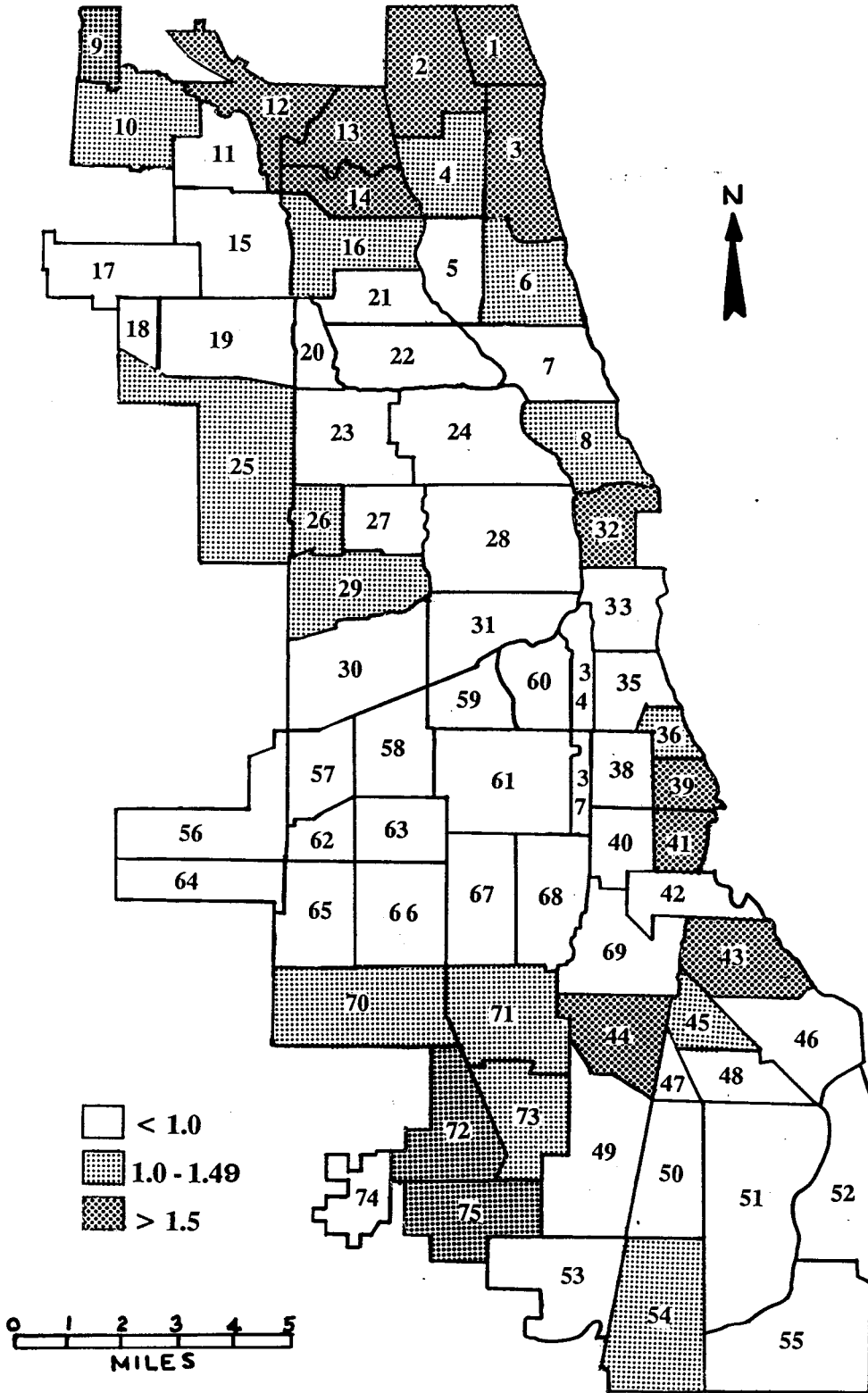


Fig.1 - Managers in Chicago in 1940

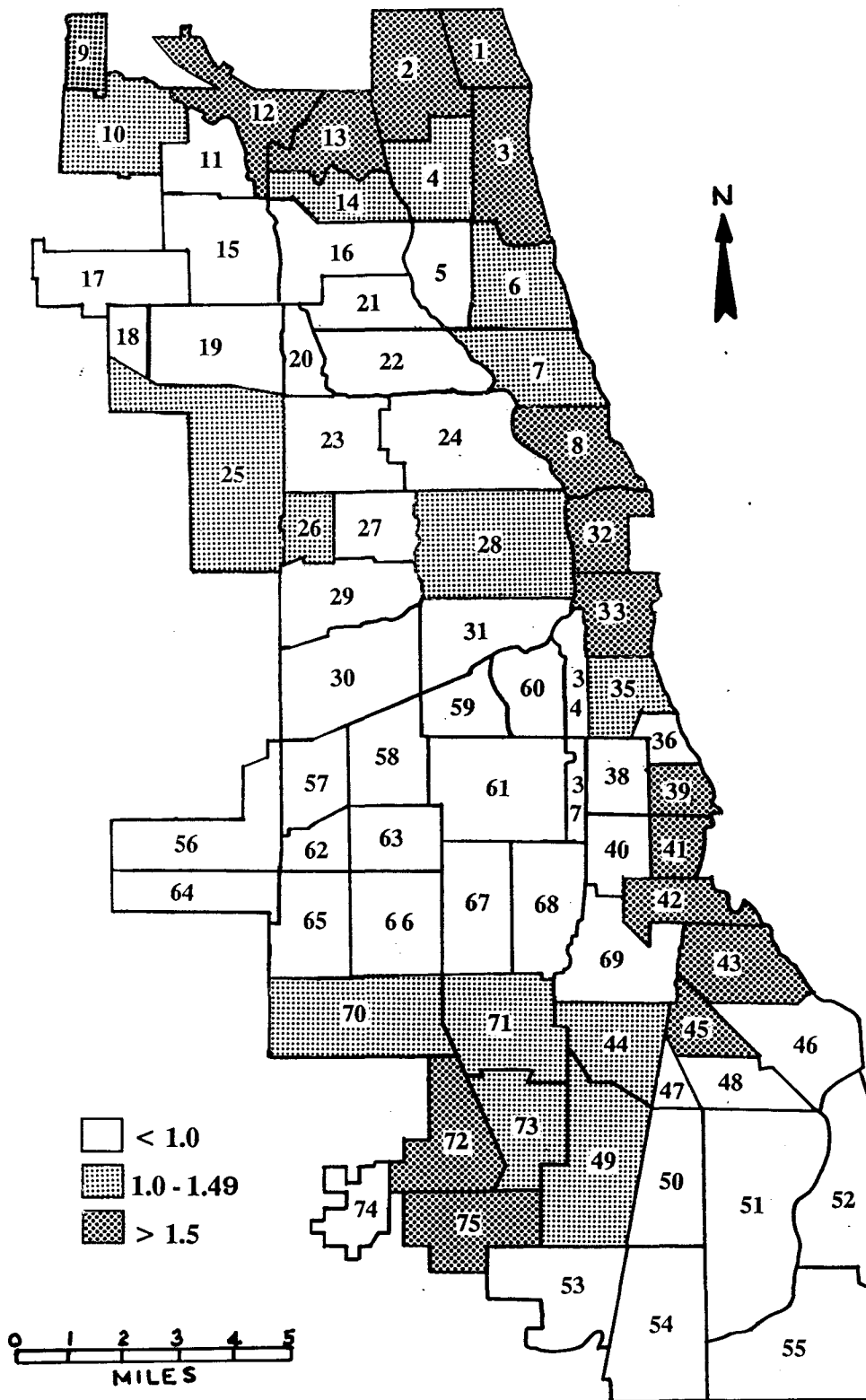


Fig.2 - Professionals & Semi-Professionals in Chicago in 1940

and the Lower West Side were mainly rental areas, but as you moved further south the slum areas decreased to middle-income stable neighbourhoods.

The areas that had the highest concentrations of craftsmen and operatives will be noted. First, there was Avondale (CA:21), where 20,000 persons were employed by manufacturing enterprises located in the area. (Hoyt, 1939, p.84) (fig.3) The median rental of Avondale was \$28.00 a month. (Hoyt, 1939, p.84) Also, West Town (CA:24 Northwest Side) where many immigrant groups lived in old apartments and 2-flats (duplexes). (Hoyt, 1939, p.80) (fig.3) Furthermore, many craftsmen and operatives were found in the Lower West Side (CA:31) which had three distinct belts: (1) an ideal neighbourhood, (2) to the south slums, and (3) on the northern border one of the worst slum areas in the city with a median rental of \$13.60. (Hoyt, 1939, p.20) Craftsmen and operatives probably lived in the ideal neighbourhood district. (fig.3)

Contrary to Burgess' concentric model, however, craftsmen and operatives were also found in high concentrations in peripheral areas probably because of industrial suburbs and affordable housing in the area. It was noted that "the most rapid growth of heavy industry...took place at the periphery...factories had been initially established because of low land costs and good transportation." (Mayer & Wade, 1969, p.350) The two main

industrial areas were the Clearing Industrial District and the Calumet District. (CA:56 & 64 and CA:51, 52 & 55) High concentrations of both craftsmen and operatives were found to reside here.

There was an overrepresentation of craftsmen and operatives living in the peripheral areas of Chicago: Archer Heights (CA:57), Garfield Ridge (CA:56) and Clearing (CA:64), also known as the Clearing Industrial District. (fig.3) These areas had stable residential single family dwellings with median rentals between \$27-\$40 a month. (Hoyt, 1939, p.62 & 64) There was a clear "sectorial pattern" extending from this area towards the central business district. Similarly, Hoyt's sector model argues, "the highest rental area is located in one or more specific sectors on one side of the city...thus, as a city grows, the high-rent areas follow definite sectorial paths outward from the center of the city, as do the middle-rent and low-rent areas." (Yeates & Garner, 1980, p.201-202)

Further south, higher than average single-family residential areas showed an overrepresentation of craftsmen and operatives. These areas were conveniently located near factories and stockyards for which these skilled and semi-skilled blue-collar workers were most likely employed. Also, a high concentration of upper-class blue-collar workers were found to reside in the community area of Mount Greenwood (CA:74), a foreign-born white single-family

dwelling area with a median rental of \$27.00 a month. (Hoyt, 1939, p.79) (fig.3) Obviously, there was varying degrees of wages that craftsmen and operatives were paid.

Finally, a large overrepresentation of craftsmen and operatives were found on the East Side periphery of Chicago. This area was known as the Calumet Industrial District. (CA:51, 52, & 55) Huge industrial plants were surrounded by neighbourhoods of single-family dwellings. For example, the community area of Hegewisch (CA:55) was a better than average area to live in, made up of a white majority. (Hoyt, 1939, p.54) (fig.3) Also, Burnside (CA:47) which was a predominantly single-family dwelling area, had an average rent of \$23.98 a month. (Hoyt, 1939, p. 48) Further south, the community areas of Pullman (CA:50), West Pullman (CA:53), and Riverdale (CA:54) contained ethnic neighbourhoods surrounded by railroad yards and industry. (fig.3) In West Pullman, in particular, there was a strong variation in the rich and poor areas located around five great plants. (Hoyt, 1939, p.52) It is probable that both the skilled and semi-skilled blue-collar workers could afford to live in these areas. The appeal of these areas was the industrial plants.

In general, craftsmen and operatives (many of them immigrants) were located in the middle of the Chicago (zone of the workingmen's homes) as Burgess argues, but they were also located along the peripheral areas because of the

location of industry. Those craftsmen and operatives, most probably male, who lived in some of the better peripheral suburban areas (Southwest Side) most likely were those that had seniority or offered special skills in their profession. The lower paid, probably semi-skilled blue-collar workers most likely lived closer to their industrial or manufacturing job and could walk to work. In any case, these blue-collar workers found affordable housing near their industrial or manufacturing jobs and not in the central business district because a great many of the industries were located in the middle areas of Chicago and the suburban industrial districts.

4.3 Clerical, Sales and Service Workers

The next occupational groups that will be examined are clerical, sales, and service workers. (See fig.4) Following Burgess' argument, this group would be located in the central business district and the zone of transition. The highest concentration of clerical, sales, and service workers were indeed found in the center of the city (CA:32) as Burgess argued. (fig.4) The clerical working-class probably resided in this area since this area offers affordable housing; and in addition, the amenities of the central business district and the lakefront.

For example, a strong area of overrepresentation for clerical, sales, and service workers was found along the lakefront communities near the Loop. These areas,

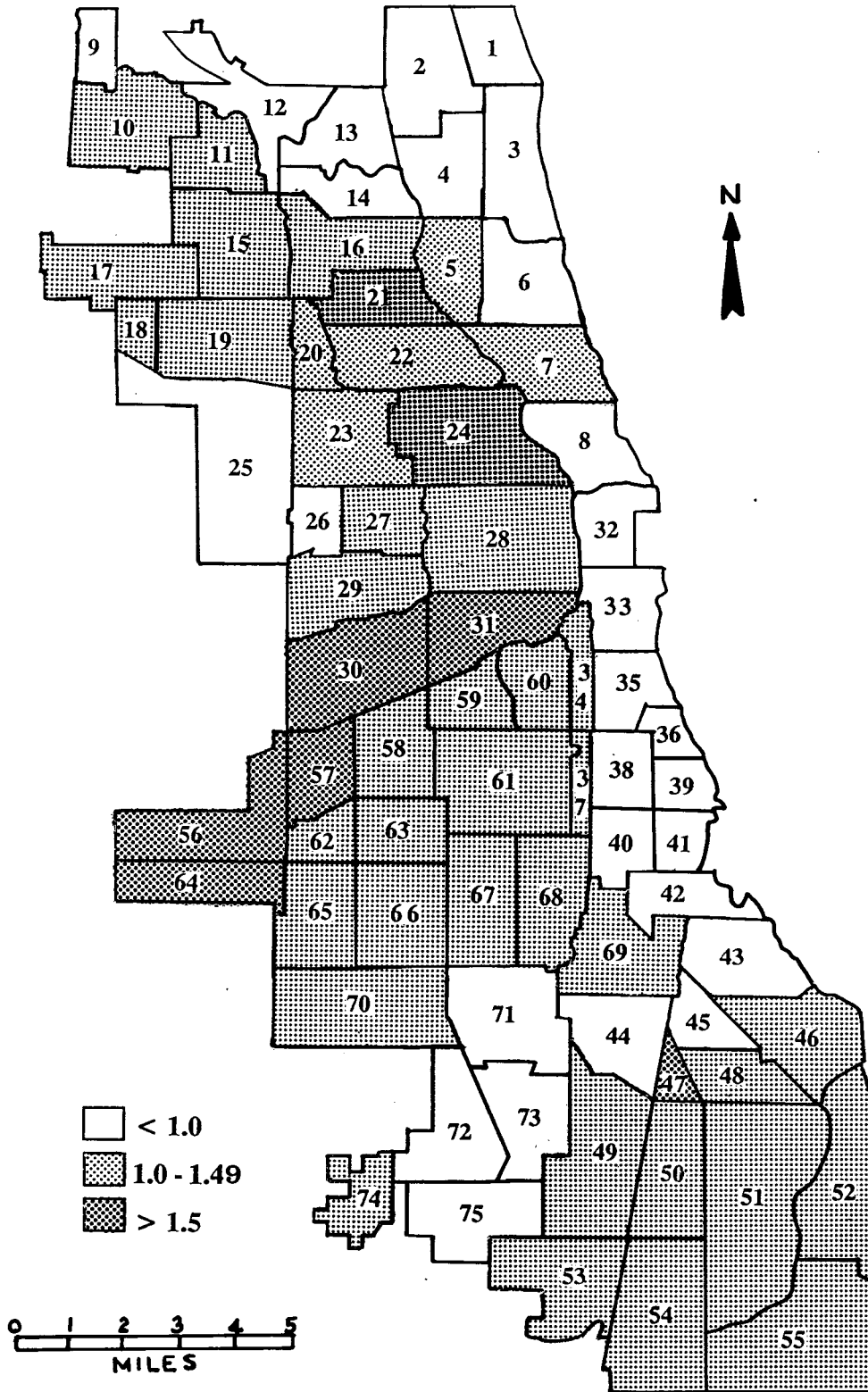


Fig.3 - Craftsmen & Operatives in Chicago in 1940

predominantly apartment and rooming house areas, were low income and contained some slum areas. In the 1920's, "the Chicago Zoning Commission reported that more than twice as many Chicagoans lived in apartments than conventional homes." (Mayer & Wade, 1969, p.324) The Near North Side (CA:8 - "the Gold Coast and the Slum") area probably housed the clerical, sales, and service workers that made small salaries since the median rents were only \$15 a month; while the "Gold Coast" area may have housed those clerical working-class that made a good salary since rents charged were over \$100 a month. (Hoyt, 1939, p.9) Most likely, the single females that worked in clerical, sales, and service sectors lived close to the Loop in rooming houses because they got paid considerably less than their male counterparts. (Kucsma, 1989, p.10) Those clerical working class, if they lived in the "Gold Coast" area, were probably married couples in which both partners worked. The farther north from the central business district, the higher the rents were; and apparently, some of the clerical, sales, and service workers could afford to pay the more expensive rents. ie. Uptown (CA:3) \$44.49 a month. (Hoyt, 1939, p.13)

Similarly, this same pattern existed to the south of the Loop where industry and railroads were found. Clerical, sales, and service workers were found to live in areas adjacent to the Loop and also further south down the lakefront in what Burgess would term as "the zone of the

workingmen's homes." So, it is clear that the salaries of the clerical working-class varied. It is important to note that clerical and sales jobs had a higher income and status before World War Two.

Not only were clerical, sales, and service workers found in or near the center as Burgess' model suggests, but they were also found to live in the periphery in high concentrations. These exceptions were most likely due to the suburban business areas and affordable housing available in the suburbs. For example, on the Northwest Side were middle-class income areas predominantly single-family and multiple dwellings. Similarly, Portage Park (CA:15) was said to be an area of "moderate income, mainly skilled and semi-skilled workers and clerks." (Hoyt, 1939, p.90) (fig.4) It is fair to assume that many clerical, sales, and service workers, primarily men (since the census did not include women who were not heads of the household), were skilled middle-income workers who lived in average income suburbs and commuted to the central business district.

Other important high concentrations of clerical, sales, and service workers were sighted in the western periphery. These areas were primarily made up of affordable housing in the form of apartments, 2-flats and bungalows. In West Garfield Park (CA:26) the median rental was \$35 a month while in East Garfield Park (CA:27) the rents were as low as \$11 a month. (Hoyt, 1939, p.24) Most significant

were the two business centers that surrounded these communities. First, was the community area of Austin (CA:25) which had an abundance of shops, commercial, and business streets. (Hoyt, 1939, p.29) Second, was North Lawndale (CA:29) which contained a commercial core housing 1,200 stores in 1935. (Hoyt, 1939, p.28) It is probable that many of the clerical, sales, and service workers that lived in these areas were employed in the Northwest Side and may have commuted to work to these business areas since it was closer than commuting to the Loop.

Similarly, a high concentration of clerical, sales, and service workers were found to reside in the Lower Southwest Side which contained suburban business areas. For example, in West Englewood (CA:68) there was a highly valued business corner. (Hoyt, 1939, p.59) Also, adjacent to it was Auburn (CA:71) a relatively new area which had a business center. (fig.4)

In sum, clerical, sales, and service workers were found in and near the central business district just as Burgess professed because they were close to their jobs and the amenities of the Loop. But, contrary to Burgess, clerical, sales, and service workers were not all concentrated in the center of the city. They were also found to be dispersed in middle-income suburbs that offered employment in nearby suburban business and commercial centers.

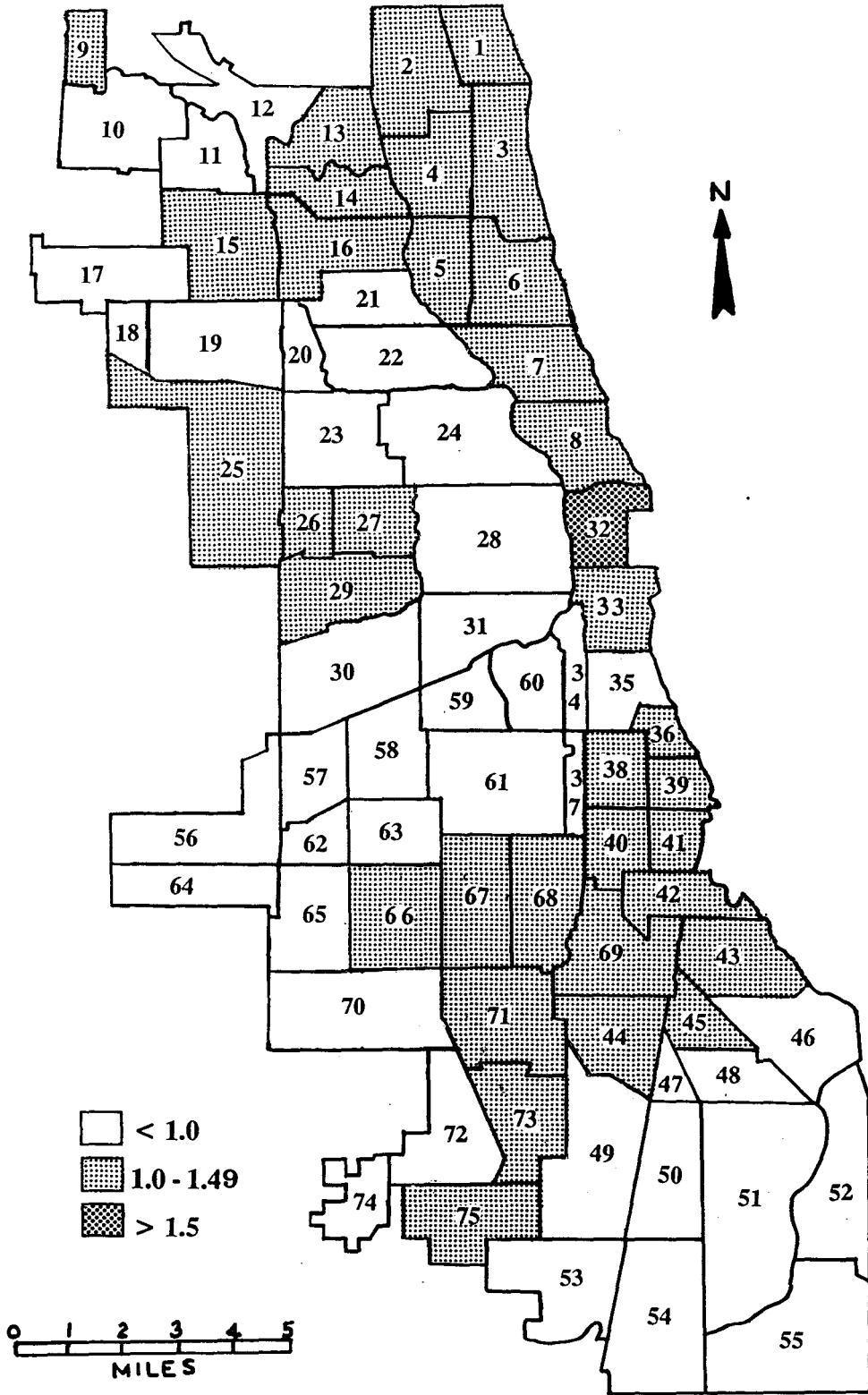


Fig.4 - Clerical, Sales & Service Workers in Chicago in 1940

4.4 Labourers

Unskilled labourers, are the next occupational group that will be examined. (fig.5) Burgess' model implies that these workers would be found in the central business district and the zone of transition. These areas offered industrial and railway jobs to the west and south of the Loop along with affordable residences because of the deteriorated housing in the area.

As Burgess argued, labourers were found living near the Loop, but the group was underrepresented in the central business district itself. In the North End of Chicago, low concentrations of labourers were found; although, labourers were overrepresented in the West Side community areas (CA:24,28,31) which were communities made up of apartments. (fig.5) These were the "[homes] of unskilled labourers, and diverse racial groups." (Hoyt, 1939, p.19) The Near West Side (CA:28) which had light industries along the river and employed 46,000 workers was found to be an area of overrepresentation for labourers. (Hoyt, 1939, p.20) The Lower West Side was one of the worst slums areas in Chicago. Still, this area was convenient for labourers because it offered affordable housing and was within walking distance to work. The areas adjacent to the central business district were areas that were heavily populated with Blacks. Burgess referred to this area as the "Black Belt". (Grand Blvd. CA:38, Washington Park CA:40) (fig.5) In the "Black

Belt" area, "to supplement their incomes, almost one fourth of the families had roomers." (Hoyt, 1939, p.35)

Also, in agreement with Burgess' model, a high concentration of labourers were found in the Southwest Side of Chicago. This area contained the Central Manufacturing District and the world's largest railway freight terminals. As Burgess termed it, this is the zone of the workingmen's home.

However, in disagreement with Burgess' model, labourers were found to be concentrated in the industrial peripheral Southwestern Side (Clearing Industrial District - CA:56 & 64) and East Side (Calumet District - CA:51, 52 & 55). (fig.5) The extension of the high concentration of labourers to the peripheral Southwestern Side formed a definite "sectoral pattern". These were residential areas in the middle of industrial tracts. The community areas of Garfield Ridge (CA:56) and Clearing (CA:64) (Clearing Industrial District) were predominantly single-family dwellings with median rentals between \$30-\$40 a month. (Hoyt, 1939, p.64) It was observed by Hoyt (1939), that in communities within the periphery of Chicago, "instead of the workers travelling long distances from their homes to places of employment in the central business district, here thousands of workers in the adjoining Clearing District travel from places of work outside the city to homes in the central urban areas." (Hoyt, 1939, p.63)

Also, a high concentration of labourers was found to reside in the quiet new residential area of Mount Greenwood (CA:74) where the median rental was a comfortable \$40 a month. (Hoyt, 1939, p.79) (fig.5) Perhaps the residents of this area took in roomers who were labourers. To the east of Mount Greenwood were several neighbourhoods that housed labourers. To the south of these communities is the East Side, where high concentrations of labourers lived and worked in the Calumet Industrial District. (fig.5) Large heavy industry plants dotted the East Side area of Chicago. There was a large majority of "first generation descendants of foreign-born; the vast majority were white." (Hoyt, 1939, p.54)

Therefore, labourers were located near the industrial districts, some being near the Loop and others located in the suburbs (The Clearing and Calumet Industrial Districts). Those that lived in the suburbs were able to afford to live there because of two main reasons: (1) the closer the housing was to industry the greater the negative externality effects (ie. pollution), therefore housing was cheaper; (2) they were lodgers in middle-class dwellings. Thus, labourers lived in affordable housing in the peripheral areas of Chicago. They could conveniently walk to work, but they did not have the amenities of the Loop available to them. In his model, Burgess did not take into account the existence of suburban industrial districts.

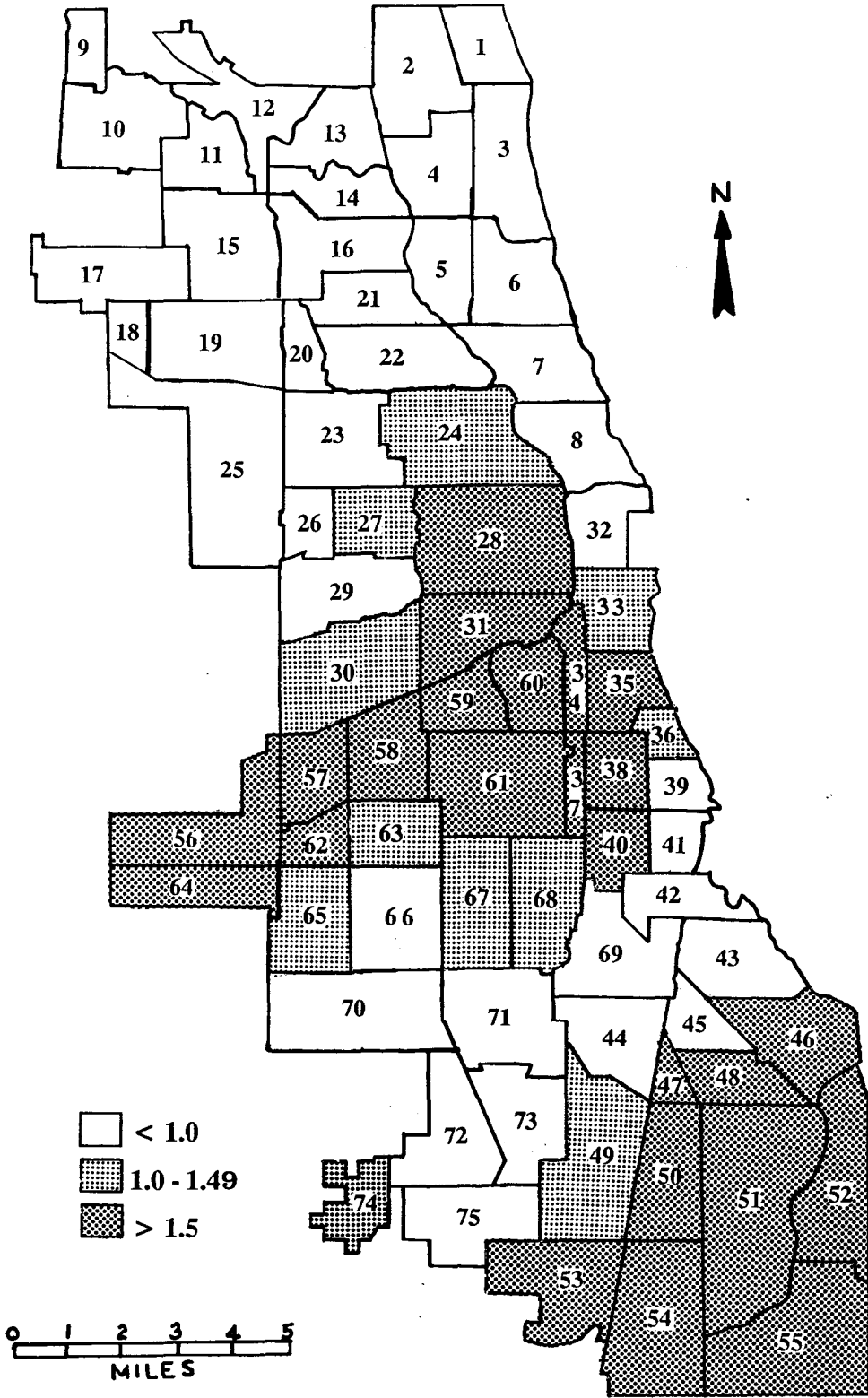


Fig.5 - Labourers in Chicago in 1940

4.5 Domestics

The last occupational group that will be examined is unskilled domestics. (fig.6) They were probably the lowest paid group and most definitely primarily made up of female workers. According to Burgess, this low-income occupational group should reside in areas in and close to the central business district. ie. the zone in transition.

Some of the main reasons for domestics living at or near the center was most likely because it offered jobs and affordable housing. A low concentration of domestics was found in the central business district itself, probably because this area was mainly a commercial area. However, adjacent to it, in the "Gold Coast and Slum" area, there was a very high concentration of domestics. (fig.6) They presumably worked cleaning the elite apartment buildings and resided in the slum or low-income backyard of these luxury apartments.

Domestics were also found to be overrepresented on the South Side of Chicago in Douglass (CA:36) and Fuller Park (CA:37). (Fig.6) These areas were low-income industrial areas where many Blacks and immigrants lived. The domestics that lived in these areas most likely worked in the central business district as maids for hotels or nearby residential dwellings. They could not afford to commute far because they were paid so poorly. In the community areas of Grand Blvd (CA:38) and Washington Park

(CA:40) one quarter of the homes had roomers to supplement their incomes. (Hoyt, 1939, p.35) So, it was likely that the domestic workers that were concentrated in these areas were roomers. Likewise, Hyde Park (CA:41) was chiefly an apartment area with a high median rental of \$50.30 a month. (Hoyt, 1939, p.38) It is feasible to assume that the domestics in the area worked cleaning the apartments and were roomers in surrounding single-family dwellings. A similar scenario probably occurred in Woodlawn (CT:46) where many hotels were located. High concentrations of domestics extended all along the North Side lakefront community areas all the way up to the North Side periphery. (fig.6) These findings are in keeping with Burgess' argument.

But, contrary to Burgess' argument, domestics were found to be living in affluent peripheral areas most likely as maids to upper and upper-middle-class homeowners. For example, high concentrations of domestics reached as far up as the peripheral suburb of Forest Glen. (CA:12) (fig.6) Forest Glen contained some of the best residential developments in Chicago with a median rental of \$75 a month. (Hoyt, 1939, p.96) Logically, those employed in domestic employment could not afford to live in these areas unless they were live-in housekeepers, and it appears many were. If they did not live in the homes they cleaned they probably lived in one of the many affordable rooming houses on the North Side.(fig.6)

Similarly, there was an overrepresentation of domestics on the East Side western periphery. These areas were the elite suburbs, especially Beverly (CA:72) and Morgan Park (CA:75). (fig.6) Again, the domestics that lived in these prestigious areas must have worked as live-in help to those who could afford to pay for their services. They would not have been able to afford to commute from the Loop to these suburban areas.

In sum, domestics (females), were found to live close to the center of the city working in the Loop. This finding supports Burgess' argument. But, in contrast, they were also found to be concentrated in peripheral elite residential areas. Interestingly, the domestic map fits in like a puzzle into the white-collar maps since they have identical areas of occupational concentration. Burgess did not account for the lower-income domestics living in the elite suburban areas in his model. Perhaps, he felt this group was not very representative of the population and therefore not important.

4.6 Patterns Beyond City Limits

Thus far, the residential patterns of upper and lower-income residents have been looked at concentrating on the City of Chicago. These observations have been done within the city limits of Chicago. What are the residential patterns of upper and lower-income residents like outside the city limits? To see if the same patterns continued

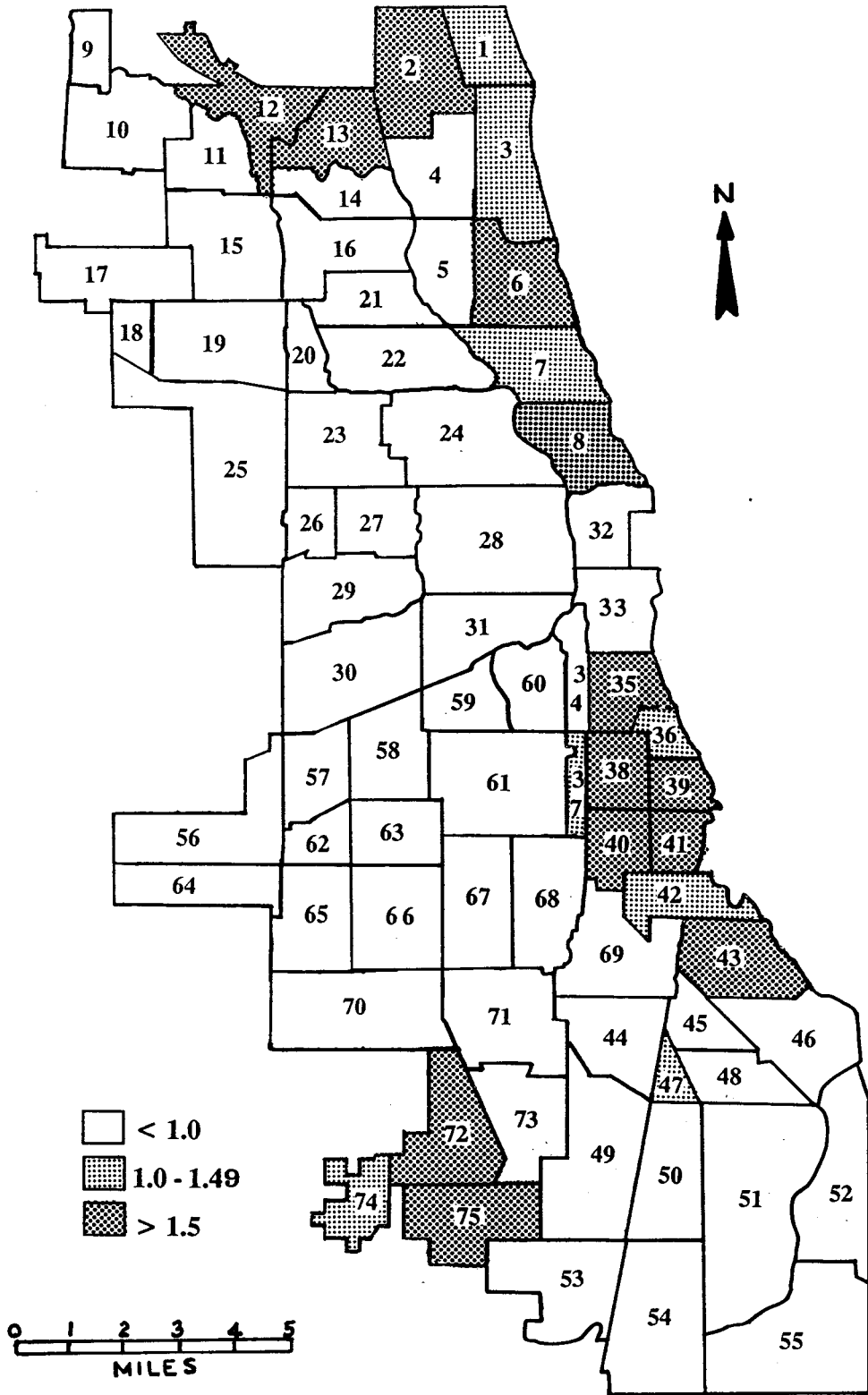


Fig.6 - Domestics in Chicago in 1940

outside the city limits the average monthly rental rates will be looked at. (fig.7) The "ability to pay" for housing designates the socio-economic status of the residents in the area. (Hoyt, 1939)

In the northern periphery of Chicago's city limits, the high-income occupational groups of managers, professionals, and semi-professionals were found to reside. This pattern continued north beyond the city limits into the suburbs of Chicago. (fig.8) There was an extension of high monthly rentals primarily along the lakefront. Obviously, the lakefront amenities played a key role in upper-income preferences of residence.

On the western periphery, within the city limits, high concentrations of middle to lower-income residents in the occupations of craftsmen, operatives, and labourers were found to live near the Clearing Industrial District. Beyond the city limits, there was an intermixing of middle and high average rents. (fig.8) Thus, the income status of residents in the western periphery improved in the areas beyond the city limits.

On the southeastern periphery of the city limits of Chicago were high concentrations of middle and lower-income residents in the occupational groups of craftsmen, operatives and labourers who worked in Calumet District. In the suburbs beyond the city limits of this area low-income districts extended out to the fringe. (fig.7)

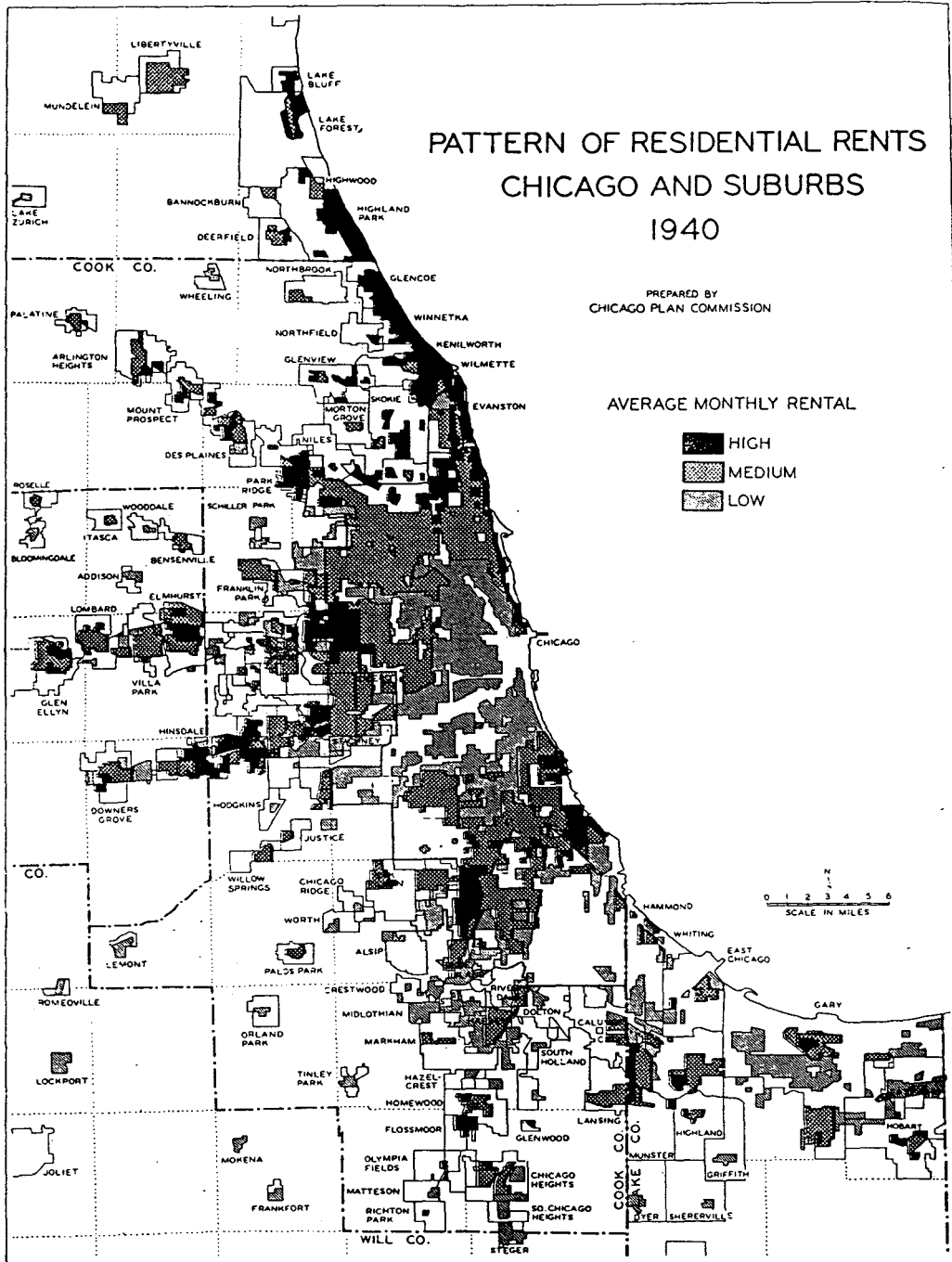


Fig.7 - Pattern of Residential Rents
Chicago and Suburbs 1940
(Chicago Plan Commission)

5.0 CONCLUSION

The primary limitations of this research paper are the problems that arise because of the categories of occupations that are used. The occupational group categories may not be a true indicator of the social status of the workers. For example, in the Chicago Census it was noted that "the occupations 'farm labourers (wage workers) and farm foreman' and 'farm labourers (unpaid family workers)'" were included in the major occupation group 'labourers'." (Chicago Census, p.2, 1940) Therefore, even though "labourers" were grouped in the same occupational category, there were different levels of wages paid to the workers depending on their employment status. This makes it difficult to define class.

Also, another problem with the census data was that women were not recognized as employees, therefore the census data is bias. The adult male of the household was counted as the "household head", so if both husband and wife worked the wife's employment was not acknowledged. If the spouses' employment had been included in the census, the information could have helped to explain certain residential patterns. For example, it could have explained why someone employed in a middle-income occupation, lived in a high-rent area.

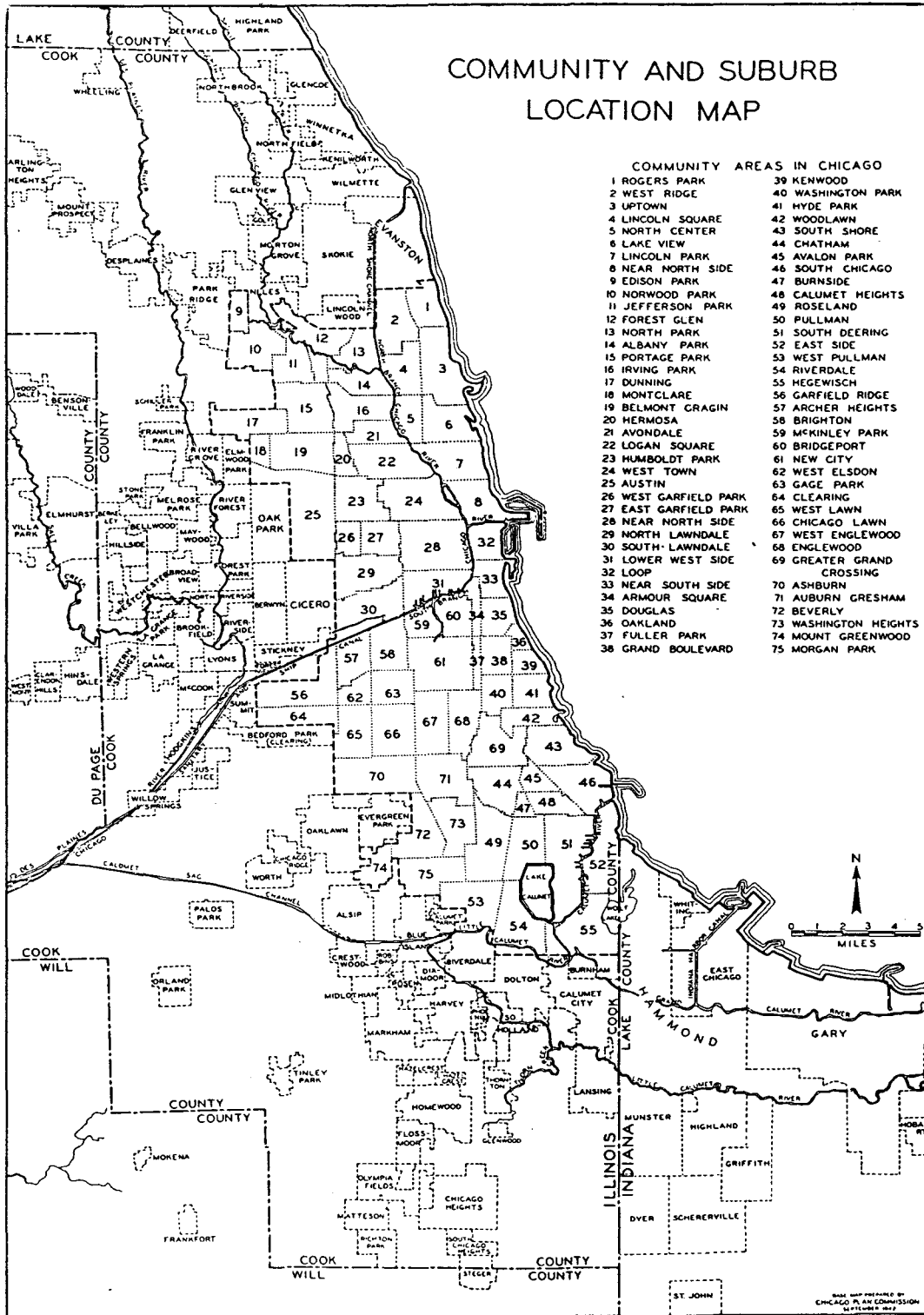
With these limitations acknowledged, the question of whether or not Burgess' model is an accurate representation of Chicago during the inter-war period will be addressed.

The concentric zone model is reproduced partially through the maps of Chicago in 1940, but there are discrepancies. (figs. 1-6) The main reasons for the discrepancies are due to the existence of industrial suburbs, sub-business centers and the lakefront. But, Burgess noted that in his model "complications are introduced by the lakefront...[and] historical factors in the location of industry." (Burgess, p. 51, 1925) Burgess explained the existence of sub-business centers as "undergoing a process of reorganization into a centralized decentralized system of local communities." (Burgess, 1925, p.52) Therefore, Burgess himself was aware of the limitations of his model. If the zonal model is accepted as a model, an abstract of reality, then Burgess' model comes close to fitting the zonal pattern. (noting the "exceptions" mentioned)

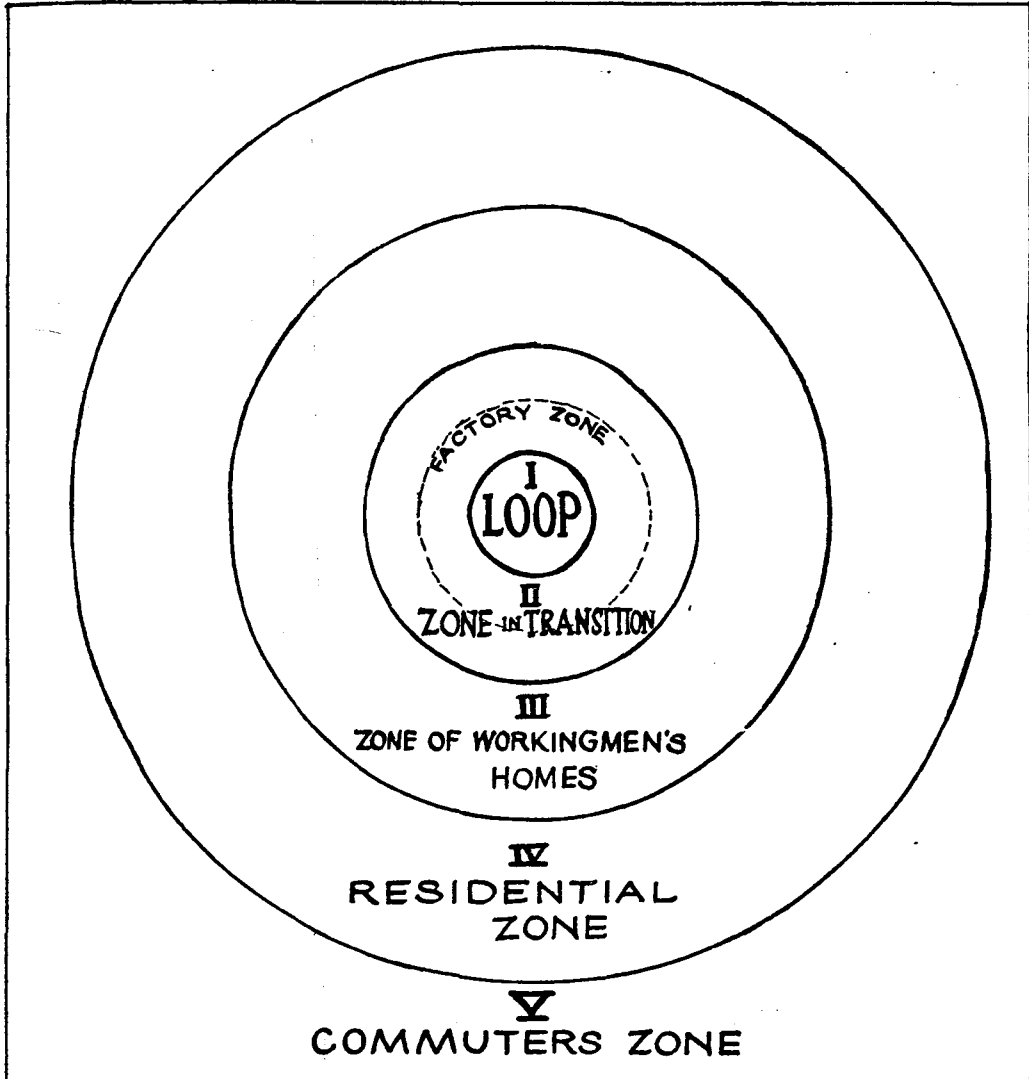
However, another aspect of the zonal model, besides the obvious residential patterning, should be examined so that the scope of the zonal model is recognized. Burgess employed the ideas of "natural areas" and "succession" in his model. A "natural area" could be a neighbourhood or a community area. The idea of "succession" creates a process of "filtering", whereby a high-income neighbourhood deteriorates and the residents move to an area with better quality housing stock. This situation allows for lower income residents to occupy the homes because they are now affordable. Even though the maps used in this study are

static there is evidence filtering occurred. For example, low-income immigrants settled in the center where the rich used to live. (fig.5) The evidence that affluent residents originated in the center of the city is found in an area like Kenwood (CA:39) which "still [maintained] a high grade single-family residential community in its center." Also, there were areas around industry that started out as low-income areas and remained so. These areas which did not undergo the filtering process because of historical inertia correspond to Hoyt's argument of rental sectors. (Hoyt, 1939) However, Hoyt's model is an imperfect dynamic, it cannot account for change. ie. the filtering process. Affluent residents did move to the suburbs as indicated in the map findings. (figs. 1&2) Burgess noted that his model may be distorted due to the "relative degree of resistance of community invasion" or succession. (Burgess, 1925, p.51) As long as continuous immigration and filtering occur, Burgess' zonal model will be reproduced.

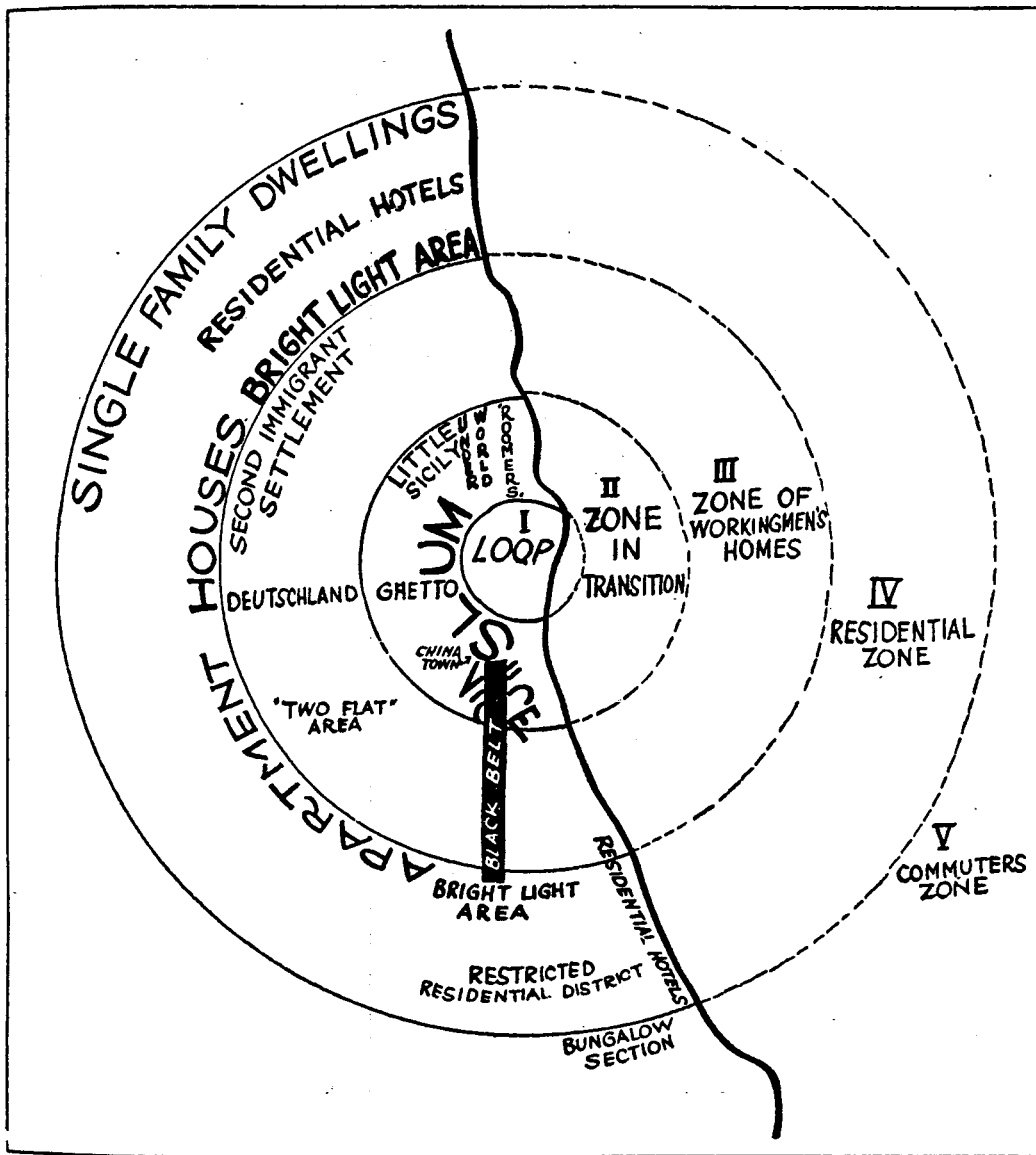
The process of filtering does not happen uniformly throughout a city. Thus, the fact that certain areas are going through a "transitional" phase of filtering could account for the fact that "perfect" zonal areas will never be reproduced because a city is always in transition. A city, like Burgess' model, is dynamic not static. Thus, Burgess' model should be considered as a valid and important model pertaining to the growth of North American cities.



Appendix 1 - Community and Suburb
Location Map 1940
(Chicago Plan Commission)



Appendix B: The Burgess Concentric Zone Model
(Burgess, 1925)



Appendix B: The Burgess Concentric Zone Model (Burgess, 1925)

Chicago 1940					

Occupation - Managers City Ttl- 8.18					

C.A.					Loc. Quot.

1	4679	28051	16.68		2.0
2	3226	17083	18.88		2.3
3	7702	64189	12.00		1.5
4	2211	20669	10.70		1.3
5	1283	19773	6.49		0.8
6	5864	55381	10.59		1.3
7	3080	42184	7.30		0.9
8	3673	35817	10.25		1.3
9	326	2273	14.34		1.8
10	578	6155	9.39		1.1
11	551	8592	6.41		0.8
12	412	2575	16.00		2.0
13	669	4563	14.66		1.8
14	3108	23517	13.22		1.6
15	2108	27909	7.55		0.9
16	2254	28481	7.91		1.0
17	546	8509	6.42		0.8
18	270	3726	7.25		0.9
19	1690	26668	6.34		0.8
20	618	9458	6.53		0.8
21	1013	20260	5.00		0.6
22	3028	46161	6.56		0.8
23	1840	32598	5.64		0.7
24	3228	65857	4.90		0.6
25	5695	56996	9.99		1.2
26	1819	20011	9.09		1.1
27	1806	25405	7.11		0.9
28	2017	39692	5.08		0.6
29	4334	38197	11.35		1.4
30	1131	29119	3.88		0.5
31	904	22464	4.02		0.5
32	502	3789	13.25		1.6
33	131	3463	3.78		0.5
34	315	4908	6.42		0.8
35	429	12543	3.42		0.4
36	409	5066	8.07		1.0
37	219	4460	4.91		0.6
38	784	32064	2.45		0.3
39	2047	13973	14.65		1.8
40	457	18656	2.45		0.3
41	3696	23688	15.60		1.9

Appendix C - Calculation of Location Quotients
 (Taken from U.S. Census of Chicago 1940)

C.A. Occupation - Managers			Loc. Quot.	
42	2333	31048	7.51	0.9
43	5851	35210	16.62	2.0
44	1936	15813	12.24	1.5
45	423	4036	10.48	1.3
46	1236	19826	6.23	0.8
47	22	1211	1.82	0.2
48	152	2676	5.68	0.7
49	1140	17153	6.65	0.8
50	65	2215	2.93	0.4
51	111	2938	3.78	0.5
52	243	5641	4.31	0.5
53	518	10288	5.03	0.6
54	44	486	9.05	1.1
55	110	2625	4.19	0.5
56	105	2617	4.01	0.5
57	99	3555	2.78	0.3
58	516	19153	2.69	0.3
59	298	7647	3.90	0.5
60	847	17824	4.75	0.6
61	1209	29358	4.12	0.5
62	36	1215	2.96	0.4
63	648	12432	5.21	0.6
64	133	2511	5.30	0.6
65	162	3764	4.30	0.5
66	1505	20869	7.21	0.9
67	1182	23810	4.96	0.6
68	2308	34883	6.62	0.8
69	1782	24016	7.42	0.9
70	28	282	9.93	1.2
71	2189	22792	9.60	1.2
72	1311	5972	21.95	2.7
73	783	7173	10.92	1.3
74	89	1410	6.31	0.8
75	599	4826	12.41	1.5

Chicago 1940				

Occupation -	Prof. & Semi-Prof.		City Ttl-	7.69

C.A.				Loc. Quot.

1	4053	28051	14.45	1.9
2	2263	17083	13.25	1.7
3	7501	64189	11.69	1.5
4	1971	20669	9.54	1.2
5	898	19773	4.54	0.6
6	5082	55381	9.18	1.2
7	3982	42184	9.44	1.2
8	4962	35817	13.85	1.8
9	327	2273	14.39	1.9
10	644	6155	10.46	1.4
11	456	8592	5.31	0.7
12	394	2575	15.30	2.0
13	743	4563	16.28	2.1
14	1730	23517	7.36	1.0
15	1685	27909	6.04	0.8
16	1976	28481	6.94	0.9
17	403	8509	4.74	0.6
18	183	3726	4.91	0.6
19	1221	26668	4.58	0.6
20	429	9458	4.54	0.6
21	776	20260	3.83	0.5
22	2433	46161	5.27	0.7
23	1360	32598	4.17	0.5
24	2377	65857	3.61	0.5
25	5966	56996	10.47	1.4
26	1514	20011	7.57	1.0
27	1605	25405	6.32	0.8
28	3199	39692	8.06	1.0
29	1889	38197	4.95	0.6
30	1005	29119	3.45	0.4
31	569	22464	2.53	0.3
32	526	3789	13.88	1.8
33	707	3463	20.42	2.7
34	110	4908	2.24	0.3
35	1091	12543	8.70	1.1
36	348	5066	6.87	0.9
37	102	4460	2.29	0.3
38	1413	32064	4.41	0.6
39	1885	13973	13.49	1.8
40	713	18656	3.82	0.5
41	5080	23688	21.45	2.8
42	3585	31048	11.55	1.5
43	5397	35210	15.33	2.0
44	1639	15813	10.36	1.3

C.A. Occupation -Prof. & Semi-Prof.		Loc. Quot.		
45	474	4036	11.74	1.5
46	1035	19826	5.22	0.7
47	26	1211	2.15	0.3
48	187	2676	6.99	0.9
49	1292	17153	7.53	1.0
50	56	2215	2.53	0.3
51	56	2938	1.91	0.2
52	214	5641	3.79	0.5
53	439	10288	4.27	0.6
54	19	486	3.91	0.5
55	69	2625	2.63	0.3
56	46	2617	1.76	0.2
57	56	3555	1.58	0.2
58	430	19153	2.25	0.3
59	242	7647	3.16	0.4
60	438	17824	2.46	0.3
61	1016	29358	3.46	0.5
62	69	1215	5.68	0.7
63	477	12432	3.84	0.5
64	92	2511	3.66	0.5
65	164	3764	4.36	0.6
66	1469	20869	7.04	0.9
67	915	23810	3.84	0.5
68	2187	34883	6.27	0.8
69	1716	24016	7.15	0.9
70	25	282	8.87	1.2
71	1850	22792	8.12	1.1
72	1226	5972	20.53	2.7
73	681	7173	9.49	1.2
74	35	1410	2.48	0.3
75	727	4826	15.06	2.0

Chicago 1940				

Occupation - Crafts. & Oper.		City Ttl - 36.12		

C.A.				Loc. Quot.

1	3608	28051	12.86	0.4
2	3058	17083	17.90	0.5
3	12454	64189	19.40	0.5
4	6061	20669	29.32	0.8
5	8968	19773	45.35	1.3
6	16527	55381	29.84	0.8
7	15408	42184	36.53	1.0
8	7078	35817	19.76	0.5
9	503	2273	22.13	0.6
10	2406	6155	39.09	1.1
11	4115	8592	47.89	1.3
12	717	2575	27.84	0.8
13	1070	4563	23.45	0.6
14	7302	23517	31.05	0.9
15	11881	27909	42.57	1.2
16	11382	28481	39.96	1.1
17	4404	8509	51.76	1.4
18	1785	3726	47.91	1.3
19	13423	26668	50.33	1.4
20	4464	9458	47.20	1.3
21	10882	20260	53.71	1.5
22	22379	46161	48.48	1.3
23	16141	32598	49.52	1.4
24	35961	65857	54.60	1.5
25	17102	56996	30.01	0.8
26	6531	20011	32.64	0.9
27	10140	25405	39.91	1.1
28	14783	39692	37.24	1.0
29	15143	38197	39.64	1.1
30	16238	29119	55.76	1.5
31	11910	22464	53.02	1.5
32	446	3789	11.77	0.3
33	892	3463	25.76	0.7
34	1995	4908	40.65	1.1
35	3299	12543	26.30	0.7
36	1586	5066	31.31	0.9
37	1849	4460	41.46	1.1
38	9052	32064	28.23	0.8
39	2345	13973	16.78	0.5
40	4439	18656	23.79	0.7
41	2951	23688	12.46	0.3
42	7964	31048	25.65	0.7
43	5648	35210	16.04	0.4
44	4355	15813	27.54	0.8

C.A. Occupation - Crafts. & Oper.				Loc. Quot.

45	1274	4036	31.57	0.9
46	8543	19826	43.09	1.2
47	667	1211	55.08	1.5
48	1215	2676	45.40	1.3
49	7061	17153	41.16	1.1
50	1108	2215	50.02	1.4
51	1463	2938	49.80	1.4
52	2932	5641	51.98	1.4
53	5240	10288	50.93	1.4
54	187	486	38.48	1.1
55	1371	2625	52.23	1.4
56	1592	2617	60.83	1.7
57	2054	3555	57.78	1.6
58	9818	19153	51.26	1.4
59	3181	7647	41.60	1.2
60	8111	17824	45.51	1.3
61	12113	29358	41.26	1.1
62	609	1215	50.12	1.4
63	6091	12432	48.99	1.4
64	1327	2511	52.85	1.5
65	1784	3764	47.40	1.3
66	7980	20869	38.24	1.1
67	10074	23810	42.31	1.2
68	12231	34883	35.06	1.0
69	8306	24016	34.59	1.0
70	108	282	38.30	1.1
71	6603	22792	28.97	0.8
72	767	5972	12.84	0.4
73	2228	7173	31.06	0.9
74	684	1410	48.51	1.3
75	1059	4826	21.94	0.6

 Chicago 1940

Occupation - Cler. Sale. & Serv. City Ttl - 38.36

	C.A.			Loc. Quot.
1	14429	28051	51.44	1.3
2	7399	17083	43.31	1.1
3	33592	64189	52.33	1.4
4	9642	20669	46.65	1.2
5	7492	19773	37.89	1.0
6	23767	55381	42.92	1.1
7	16192	42184	38.38	1.0
8	15968	35817	44.58	1.2
9	1021	2273	44.92	1.2
10	2150	6155	34.93	0.9
11	2963	8592	34.49	0.9
12	788	2575	30.60	0.8
13	1822	4563	39.93	1.0
14	10416	23517	44.29	1.2
15	10858	27909	38.91	1.0
16	11546	28481	40.54	1.1
17	2557	8509	30.05	0.8
18	1254	3726	33.66	0.9
19	8604	26668	32.26	0.8
20	3356	9458	35.48	0.9
21	6428	20260	31.73	0.8
22	15031	46161	32.56	0.8
23	10912	32598	33.47	0.9
24	17694	65857	26.87	0.7
25	25502	56996	44.74	1.2
26	8871	20011	44.33	1.2
27	9491	25405	37.36	1.0
28	13278	39692	33.45	0.9
29	14461	38197	37.86	1.0
30	7834	29119	26.90	0.7
31	5643	22464	25.12	0.7
32	2121	3789	55.98	1.5
33	1359	3463	39.24	1.0
34	1408	4908	28.69	0.7
35	4472	12543	35.65	0.9
36	2227	5066	43.96	1.1
37	1326	4460	29.73	0.8
38	12565	32064	39.19	1.0
39	6260	13973	44.80	1.2
40	8912	18656	47.77	1.2
41	10160	23688	42.89	1.1
42	15086	31048	48.59	1.3
43	16117	35210	45.77	1.2
44	7066	15813	44.68	1.2

C.A. Occupation- Cler. Sale. & Serv. Loc. Quot.				
45	1648	4036	40.83	1.1
46	5065	19826	25.55	0.7
47	255	1211	21.06	0.5
48	812	2676	30.34	0.8
49	6143	17153	35.81	0.9
50	634	2215	28.62	0.7
51	624	2938	21.24	0.6
52	1413	5641	25.05	0.7
53	2705	10288	26.29	0.7
54	109	486	22.43	0.6
55	567	2625	21.60	0.6
56	510	2617	19.49	0.5
57	852	3555	23.97	0.6
58	5008	19153	26.15	0.7
59	2205	7647	28.83	0.8
60	4928	17824	27.65	0.7
61	8065	29358	27.47	0.7
62	271	1215	22.30	0.6
63	4039	12432	32.49	0.8
64	643	2511	25.61	0.7
65	1315	3764	34.94	0.9
66	8377	20869	40.14	1.0
67	8957	23810	37.62	1.0
68	14712	34883	42.18	1.1
69	10530	24016	43.85	1.1
70	102	282	36.17	0.9
71	10838	22792	47.55	1.2
72	2057	5972	34.44	0.9
73	3078	7173	42.91	1.1
74	347	1410	24.61	0.6
75	1838	4826	38.09	1.0

Chicago 1940

Occupation - Labourers City Ttl- 6.53

C.A.			Loc. Quot.	
1	209	28051	0.75	0.1
2	245	17083	1.43	0.2
3	972	64189	1.51	0.2
4	380	20669	1.84	0.3
5	763	19773	3.86	0.6
6	1628	55381	2.94	0.5
7	2130	42184	5.05	0.8
8	1693	35817	4.73	0.7
9	35	2273	1.54	0.2
10	239	6155	3.88	0.6
11	349	8592	4.06	0.6
12	107	2575	4.16	0.6
13	57	4563	1.25	0.2
14	390	23517	1.66	0.3
15	898	27909	3.22	0.5
16	772	28481	2.71	0.4
17	445	8509	5.23	0.8
18	165	3726	4.43	0.7
19	1376	26668	5.16	0.8
20	398	9458	4.21	0.6
21	856	20260	4.23	0.6
22	2381	46161	5.16	0.8
23	1819	32598	5.58	0.9
24	5693	65857	8.64	1.3
25	1470	56996	2.58	0.4
26	915	20011	4.57	0.7
27	1754	25405	6.90	1.1
28	5289	39692	13.33	2.0
29	1827	38197	4.78	0.7
30	2480	29119	8.52	1.3
31	3058	22464	13.61	2.1
32	140	3789	3.69	0.6
33	290	3463	8.37	1.3
34	953	4908	19.42	3.0
35	1850	12543	14.75	2.3
36	333	5066	6.57	1.0
37	786	4460	17.62	2.7
38	3870	32064	12.07	1.8
39	303	13973	2.17	0.3
40	2010	18656	10.77	1.6
41	321	23688	1.36	0.2
42	1209	31048	3.89	0.6
43	589	35210	1.67	0.3
44	525	15813	3.32	0.5

C.A. Occupation - Labourers			Loc. Quot.	
45	122	4036	3.02	0.5
46	3339	19826	16.84	2.6
47	201	1211	16.60	2.5
48	255	2676	9.53	1.5
49	1074	17153	6.26	1.0
50	289	2215	13.05	2.0
51	599	2938	20.39	3.1
52	715	5641	12.68	1.9
53	1146	10288	11.14	1.7
54	119	486	24.49	3.7
55	436	2625	16.61	2.5
56	349	2617	13.34	2.0
57	449	3555	12.63	1.9
58	3139	19153	16.39	2.5
59	1614	7647	21.11	3.2
60	3279	17824	18.40	2.8
61	6502	29358	22.15	3.4
62	201	1215	16.54	2.5
63	1042	12432	8.38	1.3
64	267	2511	10.63	1.6
65	301	3764	8.00	1.2
66	1249	20869	5.98	0.9
67	2215	23810	9.30	1.4
68	2580	34883	7.40	1.1
69	1114	24016	4.64	0.7
70	17	282	6.03	0.9
71	911	22792	4.00	0.6
72	93	5972	1.56	0.2
73	271	7173	3.78	0.6
74	186	1410	13.19	2.0
75	298	4826	6.17	0.9

Chicago 1940

Occupation - Domestic City Ttl- 2.62

	C.A.			Loc. Quot.
1	988	28051	3.52	1.3
2	826	17083	4.84	1.8
3	1758	64189	2.74	1.0
4	337	20669	1.63	0.6
5	318	19773	1.61	0.6
6	2204	55381	3.98	1.5
7	1153	42184	2.73	1.0
8	2215	35817	6.18	2.4
9	56	2273	2.46	0.9
10	114	6155	1.85	0.7
11	128	8592	1.49	0.6
12	148	2575	5.75	2.2
13	188	4563	4.12	1.6
14	486	23517	2.07	0.8
15	327	27909	1.17	0.4
16	393	28481	1.38	0.5
17	123	8509	1.45	0.6
18	50	3726	1.34	0.5
19	236	26668	0.88	0.3
20	104	9458	1.10	0.4
21	215	20260	1.06	0.4
22	701	46161	1.52	0.6
23	346	32598	1.06	0.4
24	600	65857	0.91	0.3
25	994	56996	1.74	0.7
26	281	20011	1.40	0.5
27	479	25405	1.89	0.7
28	859	39692	2.16	0.8
29	396	38197	1.04	0.4
30	288	29119	0.99	0.4
31	272	22464	1.21	0.5
32	18	3789	0.48	0.2
33	73	3463	2.11	0.8
34	111	4908	2.26	0.9
35	1366	12543	10.89	4.2
36	151	5066	2.98	1.1
37	159	4460	3.57	1.4
38	4245	32064	13.24	5.1
39	1090	13973	7.80	3.0
40	2050	18656	10.99	4.2
41	1401	23688	5.91	2.3
42	775	31048	2.50	1.0
43	1363	35210	3.87	1.5
44	237	15813	1.50	0.6

C.A. Occupation - Domestic			Loc. Quot.	
45	82	4036	2.03	0.8
46	440	19826	2.22	0.8
47	32	1211	2.64	1.0
48	41	2676	1.53	0.6
49	298	17153	1.74	0.7
50	30	2215	1.35	0.5
51	37	2938	1.26	0.5
52	83	5641	1.47	0.6
53	121	10288	1.18	0.4
54	4	486	0.82	0.3
55	51	2625	1.94	0.7
56	8	2617	0.31	0.1
57	16	3555	0.45	0.2
58	132	19153	0.69	0.3
59	52	7647	0.68	0.3
60	131	17824	0.73	0.3
61	334	29358	1.14	0.4
62	9	1215	0.74	0.3
63	78	12432	0.63	0.2
64	20	2511	0.80	0.3
65	24	3764	0.64	0.2
66	174	20869	0.83	0.3
67	346	23810	1.45	0.6
68	664	34883	1.90	0.7
69	401	24016	1.67	0.6
70	2	282	0.71	0.3
71	289	22792	1.27	0.5
72	493	5972	8.26	3.2
73	109	7173	1.52	0.6
74	48	1410	3.40	1.3
75	277	4826	5.74	2.2

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