THE NEGRO GHETTO: PROBLEMS AND ALTERNATIVES

RICHARD L. MORMILL

GHETTOS,” as we must realistically term the segregated areas occupied by Negroes and other minority groups, are common features of American urban life. The vast majority of Negroes, Japanese, Puerto Ricans, and Mexican-Americans are forced by a variety of pressures to reside in restricted areas, in which they themselves are dominant. So general is this phenomenon that not one of the hundred largest urban areas can be said to be without ghettos.¹

Inferiority in almost every conceivable material respect is the mark of the ghetto. But also, to the minority person, the ghetto implies a rejection, a stamp of inferiority, which stifles ambition and initiative. The very fact of residential segregation reinforces other forms of discrimination by preventing the normal contacts through which prejudice may be gradually overcome. Yet because the home and the neighborhood are so personal and intimate, housing will be the last and most difficult step in the struggle for equal rights.

The purpose here is to trace the origin of the ghetto and the forces that perpetuate it and to evaluate proposals for controlling it. The Negro community of Seattle, Washington, is used in illustration of a simple model of ghetto expansion as a diffusion process into the surrounding white area.

From the beginning of the nineteenth century the newest immigrants were accustomed to spend some time in slum ghettos of New York, Philadelphia, or Boston.² But as their incomes grew and their English improved they moved out into the American mainstream, making way for the next group. During the nineteenth century the American Negro population, in this country from the beginning but accustomed to servitude, remained predominantly southern and rural. Relatively few moved to the North, and those who did move lived in small clusters about the cities. The Negro ghetto did not exist.³ Even in southern cities the Negroes, largely in the


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service of whites, lived side by side with the white majority. Rather suddenly, with the social upheaval and employment opportunities of World War I, Negro discontent grew, and large-scale migration began from the

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rural south to the urban north, to Philadelphia, New York, Chicago, and St. Louis, and beyond.

The influx was far larger than the cities could absorb without prejudice. The vision of a flood of Negroes, uneducated and unskilled, was frightening both to the whites and to the old-time Negro residents. As the poorest and newest migrants, the Negroes were forced to double up in the slums that had already been created on the periphery of business and industrial districts. The pattern has never been broken. Just as one group was becoming settled, another would follow, placing ever greater pressure on the limited area of
settlement, and forcing expansion into neighboring areas, being emptied from fear of inundation. Only in a few cities, such as Minneapolis–St. Paul and Providence and other New England cities, has the migration been so small and so gradual that the Negro could be accepted into most sections as an individual.

America has experienced four gigantic streams of migration: the European immigration, which up to 1920 must have brought thirty million or more; the westward movement, in which from 1900 to the present close to ten million persons have participated; the movement from the farms to the cities, which since 1900 has attracted some thirty million; and the migration of Negroes to the North and West, which has amounted since World War I to about five million, including some three million between 1940 and 1960 (Table I). The pace has not abated. Contributing also to the ghetto population have been 900,000 Puerto Ricans, who came between 1940 and 1960, largely to New York City; about 1,500,000 Mexicans, descendants of migrants to the farms and cities of the Southwest; and smaller numbers of Chinese, Japanese, and others. Economic opportunity has been the prime motivation for all these migrant groups, but for the Negro there was the additional hope of less discrimination.

The rapidity and magnitude of the Negro stream not only have increased the intensity and size of ghettos in the North but no doubt have also accelerated the white “flight to the suburbs” and have strongly affected the economic, political, and social life of the central cities. In the South, too, Negroes have participated in the new and rapid urbanization, which has been accompanied by increased ghettoization and more rigid segregation.

As a result of these migrations, the present urban minority population consists, in the North and West, of 7.5 million Negroes and 4 million others, together 12.5 percent of the total regional urban population; in the South, of 6.5 million Negroes, 20 percent; in total, of 18 million, 14 percent. The proportion is increasing in the North, decreasing in the South. Minority populations in large American cities are presented in Table II.

THE NATURE OF THE Ghetto

If we study the minority population in various cities, we can discern real differences in income, education, occupational structure, and quality of

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4 Ibid., pp. 29–43.
6 Nonwhite Population by Race [see footnote 1 above].
homes. For example, median family income of Negroes ranges from $2600 in Jackson, Mississippi, to $5500 in Seattle; and as a proportion of median white family income, from 46 percent to 80 percent respectively. The United States median family income for Negroes in urban areas is only $3700, as compared with $6400 for whites, but it is more than double the figure for Negroes still living in rural areas, $1750. It is not hard, therefore, to understand the motivation for Negro migration to the northern cities, where striking progress has really been made.

But the stronger impression is of those general characteristics which are repeated over and over. The ghetto system is dual: not only are Negroes excluded from white areas, but whites are largely absent from Negro areas. Areas entirely or almost exclusively white or nonwhite are the rule, areas of mixture the exception. The ghettos, irrespective of regional differences, are always sharply inferior to white areas; home ownership is less and the houses are older, less valuable, more crowded, and more likely to be substandard. More than 30 percent of Negro urban housing is dilapidated or without indoor plumbing, as compared with less than 15 percent for whites. The ghetto is almost always in a zone peripheral to the central business district, often containing formerly elegant houses intermingled with commercial and light industrial uses. As poor, unskilled labor, Negroes settled near the warehouses and the railroads, sometimes in shacktowns, and gradually took over the older central houses being abandoned by the most recently segregated groups—for example, the Italians and the Jews—as their rise in economic status enabled them to move farther out. More than one ghetto may appear on different sides of the business district, perhaps separated by ridges of wealthy, exclusive houses or apartments.

The Negro differs fundamentally from these earlier groups, and from the Mexicans and Puerto Ricans as well. As soon as economic and educational improvements permit, the lighter-skinned members of the other groups may escape the ghetto, but black skin constitutes a qualitative difference in the minds of whites, and even the wealthy Negro rarely finds it possible to leave the ghetto. Color takes precedence over the normal determinants of our associations.

In the southern city Negroes have always constituted a large proportion of the population and have traditionally occupied sections or wedges, extending from the center of the city out into the open country. Indeed, around some

7 Census Tract Reports [see footnote 1 above].
8 McEntire, op. cit. [see footnote 5 above], pp. 148–156.
9 Abrams, op. cit. [see footnote 3 above], p. 73.
FIG. 1—A group of representative ghettos. The dashed-line boundary on the Boston map indicates the inner urbanized area. Source: 1960 census data.

cities, such as Charleston, South Carolina, the outer suburban zone is largely Negro. Figure 1 depicts the ghetto pattern for selected cities.

The impact of the ghetto on the life of its residents is partly well known, partly hidden. The white person driving through is struck by the poverty, the substandard housing, the mixture of uses, and the dirt; he is likely to feel that these conditions are due to the innate character of the Negro. The underlying fact is, of course, that Negroes on the average are much poorer, owing partly to far inferior educational opportunities in most areas, but more to systematic discrimination in employment, which is only now beginning to be broken. Besides pure poverty, pressure of the influx into most northern cities itself induces deterioration: formerly elegant houses, abandoned by whites, have had to be divided and redvided to accommodate the newcomers, maintenance is almost impossible, much ownership is by absentee whites. Public services, such as street maintenance and garbage collection, and amenities, such as parks and playgrounds, are often neglected. Residential
segregation means de facto school segregation. Unemployment is high, at least double the white average, and delinquency and crime are the almost inevitable result. A feeling of inferiority and hopelessness comes to pervade the ghetto. Most important is the enormous waste of human resources in the failure to utilize Negroes to reasonable capacity. The real cost of maintaining the ghetto system is fantastic. In direct costs the city spends much more in crime prevention, welfare payments, and so forth than it can collect.\textsuperscript{10} The ghetto is the key to the Negro problem.

What are the forces that operate to maintain the ghetto system? Four kinds of barriers hinder change: prejudice of whites against Negroes; characteristics of the Negroes; discrimination by the real-estate industry and associated financial institutions; and legal and governmental barriers. Naked prejudice is disclaimed by a majority of Americans today. Today's prejudice is not an outright dislike; it is, rather, a subtle fear, consisting of many elements. The typical white American may now welcome the chance to meet a Negro, but he is afraid that if a Negro moves into his neighborhood it will break up and soon be all Negro. Of course, on a national average there are not as many Negroes as that—only one or two families to a block—but the fear exists because that is the way the ghetto has grown. A greater fear is of loss in social status if Negroes move in. This reflects the culture-bred notion that Negroes are inherently of lower standing. Some persons are terrified at the unlikely prospect of intermarriage. Finally, people are basically afraid of, or uncertain about, people who are different, especially in any obvious physical way. These fears combine into powerful controls to maintain segregation: refusal to sell to Negroes, so as not to offend the neighbors; and the tendency to move out as soon as a Negro enters, in order not to lose status by association.

The Negro himself contributes, however unwillingly, to ghettoization. It is difficult to be a minority as a group, but more difficult still to be a minority alone. Consequently the desire to escape the ghetto and move freely in the larger society is tempered by a realization of the problems in store for the "pioneer" and hesitancy to cut neighborhood ties with his own kind. Few people have such courage. In most cities, even if there were no housing discrimination, the ghetto would still persist, simply because a large proportion of Negroes could not afford, or would be afraid, to leave. Most Negroes achieve status and acceptance only within the Negro community. Usually Negroes who leave the ghetto prefer Negro neighbors; the risk is

\textsuperscript{10} John C. Alston: Cost of a Slum Area (Wilberforce State College, Wilberforce, Ohio, 1948).
that this number, however small, is enough to initiate the conversion to full-scale ghetto.  

The Negro today suffers from his past. The lack of initiative and the family instability resulting from generations of enforced or inculcated subservience and denial of normal family formation are still present and are a barrier to white acceptance. The far lower levels of Negro income and education, no matter how much they are due to direct neglect and discrimination by the white majority, are nevertheless a strong force to maintain the ghetto. Studies show that whites will accept Negroes of equivalent income, education, and occupation.  

The strongest force, however, in maintaining the ghetto may well be real-estate institutions: the real-estate broker and sources of financing. It has always been, and continues to be, the clear-cut, official, and absolute policy of the associations of real-estate brokers that “a realtor should never be instrumental in introducing into a neighborhood a character of property or occupancy, members of any race or nationality, or any individuals whose presence will clearly be detrimental to property values in that neighborhood.” Many studies have attempted to resolve this problem. In the long run, property values and rents exhibit little if any change in the transition from white to Negro occupancy. Sale prices may fall temporarily under panic selling, a phenomenon called the “self-fulfilling prophecy”—believing that values will fall, the owner panics and sells, and thus depresses market values.  

The real-estate industry opposes with all its resources not only all laws but any device, such as cooperative apartments or open-occupancy advertising, to further integration. Real-estate and home-building industries base this policy on the desirability of neighborhood homogeneity and compatibility. Perhaps underlying the collective action is the fear of the individual real-estate broker that if he introduces a Negro into a white area he will be

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13 McEntire, op. cit. [see footnote 9 above], p. 245.


penalized by withdrawal of business. There is, then, a real business risk to the individual broker in a policy of integration, if none to the industry as a whole. Segregation is maintained by refusal of real-estate brokers even to show, let alone sell, houses to Negroes in white areas. Countless devices are used: quoting excessive prices, saying the house is already sold, demanding unfair down payments, removing "For sale" signs, not keeping appointments, and so on. Even if the Negro finds someone willing to sell him a house in a white area, financing may remain a barrier. Although his income may be sufficient, the bank or savings institution often refuses to provide financing from a fear of Negro income instability, and of retaliatory withdrawal of deposits by whites. If financing is offered, the terms may be prohibitive. Similar circumstances may also result when a white attempts to buy a house—for his residence—in a heavily minority area.

Through the years many legal procedures have been used to maintain segregation. Early in the century races were zoned to certain areas, but these laws were abolished by the courts in 1917. The restrictive covenant, in which the transfer of property contained a promise not to sell to minorities, became the vehicle and stood as legal until 1948, since when more subtle and extralegal restrictions have been used.

Until 1949 the federal government was a strong supporter of residential segregation, since the Federal Housing Administration required racial homogeneity in housing it financed or insured. As late as 1963, when the President by Executive order forbade discrimination in FHA-financed housing, the old philosophy still prevailed in most areas. Finally, many states, and not just those in the South, still encourage separation. Even in the few states with laws against discrimination in housing, the combined forces for maintaining segregation have proved by far the stronger.

The Process of Ghetto Expansion

The Negro community in the North has grown so rapidly in the last forty years, almost doubling in every decade, that even the subdivision of houses cannot accommodate the newcomers. How does the ghetto expand? Along its edge the white area is also fairly old and perhaps deteriorating. Many whites would be considering a move to the suburbs even if the ghetto were not there, and fears of deterioration of schools and services, and the feeling that all the other whites will move out, reinforce their inclination to move. Individual owners, especially in blocks adjoining the ghetto, may become anxious to sell. Pressure of Negro buyers and fleeing white residents, who see the solid ghetto a block or two away, combine to scare off potential
white purchasers; the owner's resistance gradually weakens; and the transfer is made.

The role of proximity is crucial. On adjacent blocks the only buyers will be Negroes, but five or six blocks away white buyers will still be the rule. In a typical ghetto fringe in Philadelphia the proportion of white buyers climbed from less than 4 percent adjacent to the ghetto itself to 100 percent five to seven blocks away. Figure 2 illustrates the great concentration of initial entry of new street fronts in a band of two or three blocks around a ghetto. The "break" zone contains 5 percent or fewer Negroes, but 60 percent of the purchases are by Negroes. Typically, a white on the edge does not mind one or two Negroes on the block or across the street, but if a Negro moves next door the white is likely to move out. He is replaced by a Negro, and the evacuation-replacement process continues until the block has been

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16 Rapkin and Grigsby, op. cit. [see footnote 11 above], pp. 56-38.
solidly transferred from white to Negro residence. Expansion of the ghetto is thus a block-by-block total transition.

In this process the real-estate agent is also operative. If the demand for Negro housing can be met in the area adjacent to the ghetto, pressure to move elsewhere in the city will diminish. The real-estate industry thus strongly supports the gradual transition along the periphery. After the initial break the real-estate broker encourages whites to sell. The transition is often orderly, but the unscrupulous dealer sometimes encourages panic selling at deflated prices, purchasing the properties himself and reselling them to Negroes for windfall profits. The probability of finding a white seller is high in the blocks adjacent to the ghetto but falls off rapidly at greater distances, as whites try to maintain familiar neighborhood patterns and conceive this to be possible if the Negro proportion can be kept small. The process of transition is destructive to both groups, separately and together. Whites are in a sense "forced" to sell, move, and see their neighborhoods disband, and Negroes are forced to remain isolated; and total transition reinforces prejudice and hinders healthy contact.

Spread of the Negro ghetto can be described as a spatial diffusion process, in which Negro migrants gradually penetrate the surrounding white area. From some origin, a block-by-block substitution or diffusion of a new condition—that is, Negro for white occupancy—takes place. The Negro is the active agent; he can move easily within the ghetto and can, though with difficulty, "pioneer" outside it. The white is passive, an agent of resistance or inertia. Resistance against escape of Negroes from the ghetto takes two forms: rebuff of attempts to buy; and diminishing willingness to sell with increasing distance from areas or blocks that already have Negroes. On the average the Negro will have to try more than once to consummate a sale, or, conversely, the owner will have to be approached by more than one buyer. Once the block is broken, however, resistance falls markedly, and transition begins. Although a complete model would take into account that a few whites continue to purchase in transition areas, the rate is insufficient, the net flow clear-cut, and the transition inevitable.

The proposed diffusion model is of the probabilistic simulation type. It is probabilistic rather than deterministic for several reasons. We do not have sufficient definite information concerning the motivations for specific

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house-to-house moves of particular persons, but only general ideas concerning the likelihood of movement and how far. We are not dealing with a large aggregate of migrants, but with only a few individuals in a short period of time in a small area. If we had a thousand migrants, we could safely predict how many would move how far, but at the micro-level a probabilistic approach is required to evaluate individual decisions in the face of a complex of possible choices. Rather than determine that a specific migrant moves from one particular house to another, we find the probability of a typical migrant's move from a block to any and all other blocks, and we use random numbers to decide which destination, among the many possible, he chooses. We thus obtain a spatial pattern of moves, which spreads settlement into new blocks and intensifies it in old blocks.

The model is simulated rather than "real" because it does not purport to predict individual behavior of actual people, but to simulate or pretend moves for typical households. Simulation is a valuable technique in science and technology, in which a model is constructed to depict artificially certain major features of some real process.

The simulation of diffusion model is important in biology, in rural and general sociology, and in communications, and has been used in geography. It is an ideal vehicle for the characteristics of ghetto expansion—a process of growth in time, concerning behavior of small groups in small areas in small units of time, in which a powerful element of uncertainty remains, even though the general parameters of the model tend to channel the results. This randomness is evident in the real situation, since we observe that the ghetto, like a rumor or an innovation, does not progress evenly and smoothly in all directions but exhibits an uneven edge and moves at different rates in different directions, here advancing from block to block, there jumping over an obstacle.

We do not expect the simulated patterns to match precisely the actual patterns. We do want the model to generate a pattern of expansion that corresponds in its characteristics to the real pattern, and we can satisfy ourselves of the correspondence by visual and statistical tests. The purpose and hope are to discover and illustrate the nature of the ghetto expansion process, in full knowledge that the detail of the ultimate step is omitted—how the actual individual decides between his specific alternatives. The omission is justified, because we know that the combined effect of many individual

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decisions can often be described by a random process. The real test here is whether the spread, over a period of time, has the right extent, intensity, solidity or lack of it, and so on.

**The Model**

A model of ghetto expansion must incorporate several elements: natural increase of the Negro population; Negro immigration into the ghetto; the nature of the resistance to Negro out-migration and its relation to distance; land values and housing characteristics; and the population size limits of destination blocks.

Beginning with the residential pattern at a particular time (in the Seattle example, 1940), migration and the spread of Negro settlement are simulated for ten two-year periods through 1960. The steps are as follows.

A. Taking into account natural increase for each period of the Negro population resident in the Seattle ghetto, at the observed rate of 5 percent every two years.

B. Assigning immigrants who enter the study area from outside at the observed mean rate of 10 percent every two years of the Negro population at the beginning of a period. These are assigned by random numbers, the probability that an area will be chosen being proportional to its present Negro population. Presumably, immigrants entering the area will find it easier to live, at least temporarily, and will find opportunities in houses or apartments or with friends, in approximate reflection of the number of Negro units available. After initial residence in the ghetto, the model allows these immigrants to participate in further migration.

C. Assigning internal migrants, at the rate of 20 percent of the Negro households (including natural increase and immigration) of each block every two years, in the following manner:

1. Each would-be migrant behaves according to a migration probability field (Fig. 3) superimposed over his block. This migration probability field can be shifted about so that each would-be migrant can in turn be regarded as located at the position indicated by X. The numbers in the blocks show where the migrant is to move, depending on which number is selected for him in the manner described below. Blocks adjoining position X have three numbers (for example, 48-50); more distant blocks have two numbers (for example, 54-55); and the most distant have one number (for example, 98). Since 100 numbers are used, the total number of these numbers used in any one block may be regarded as the probability, expressed as a percentage, that any one migrant will move there. Thus a movable probability field, or information field, such as this states the probabilities of a migrant for moving any distance in any direction from his original block. Probability fields are often derived, as this one was, from empirical observations of migration distances. That is, if we look at a large number of moves, their lengths follow a simple frequency distribution, in which the probability of moving declines as distance from the home block increases. Such probabilities reflect the obvious fact of decreasing likelihood of knowing about opportunities at greater and greater distances from home. Thus the probability is higher that a prospective migrant will move to adjacent blocks than to more distant
THE NEGRO Ghetto

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Fig. 3 (left)—The migration probability field.

Fig. 4 (upper right)—Negro residents at start of period.

Fig. 5 (center)—Distribution of immigrants. Tally marks indicate entry into appropriate blocks.

Fig. 6 (lower right)—Movement of migrants from three sample blocks. Large figures, resident Negroes; italic figures, number of migrants; broken lines, contact only; solid lines, actual moves.

ones. The probability field provides a mechanism for incorporating this empirical knowledge in a model.

2. Randomly selected numbers, as many as there are migrants, are used to choose specific destinations, according to these probabilities, as will be illustrated below. The probability field as such makes it as likely for a Negro family to move into a white area as to move within the ghetto. A method is needed to take into account the differential resistance of Negro areas, and of different kinds or qualities of white areas, to Negro migration. Modification of the probability field is accomplished by the following procedures.

a) If a random number indicates a block that already contains Negroes, the move is made immediately (no resistance).

b) If a random number indicates a block with no Negroes, the fact of contact is registered, but no move is made.

c) If, however, additional numbers indicate the same block contacted in b, in the same or the next two-year period, and from whatever location, then the move is made. This provides a means for the gradual penetration of new areas, after some persistence by Negroes and resistance by whites. Under such a rule, the majority of Negro contacts into white areas will not be followed by other contacts soon enough, and no migration takes place. In the actual study area chosen, it was found that resistance to Negro entry was great to the west, requiring that a move be allowed there only after three contacts, if the sim-
ulated rate of expansion was to match the observed rate. This is an area of apartments and high-value houses. To the north and east, during this period, resistance varied. At times initial contacts ended in successful moves and transition was rapid; at other times a second contact was required. These facts were incorporated into the operation of this phase of the model.

D. There is a limit (based on zoning and lot size) to the number of families that may live on a block. Thus when the population, after natural increase and immigration, temporarily exceeds this limit, the surplus must be moved according to the procedures above. Obviously, in the internal-migration phase no moves are allowed to blocks that are already filled. The entire process is repeated for the next and subsequent time periods.

**Hypothetical Example of the Model**

*Immigration (A and B).* Let us assume at the start that the total Negro population—that is, the number of families—including natural increase is one hundred, distributed spatially as in Figure 4. Here the numbers indicate the number of families in each block. Ten immigrant families (10 percent) enter from outside. The probability of their moving to any of the blocks is proportional to the block’s population and here, then, is the same in percentage as the population is in number. In order that we may use random numbers to obtain a location for each immigrant family, the probabilities are first accumulated as whole integers, from 1 to 100, as illustrated in Figure 5. That is, each original family is assigned a number. Thus the third block from the left in the second row has two of the one hundred families, identified by the numbers 1 and 2, and therefore has a 2 percent chance of being chosen as a destination by an immigrant family. The range of integral numbers 1–2 corresponds to these chances. The bottom left-hand block has a 5 percent probability, as the five numbers 37–41 for the families now living there indicate. If, then, the random number 1 or 2, representing an immigrant family, comes up, that family will move to the third block in the second row. For the ten immigrant families we need ten random numbers. Assume that from a table of random numbers we obtain, for example, the numbers 91, 62, 17, 08, 82, 51, 47, 77, 11, and 56. The first number, 91, falls in the range of probabilities for the next to the last block in the bottom row. We place an immigrant family in that block. The second number, 62, places an immigrant family in the third block from the left in the bottom row. This process is continued until all ten random numbers are used. The final distribution of immigrant families is shown by the small tally marks in various blocks in Figure 5. The population of blocks after this immigration is shown in Figure 6. Here the large numerals indicate the number of families now in the blocks.
It should be made clear that the migrants could not have been assigned exactly proportional to population, because there are not enough whole migrants to go around. The first two blocks, for example, would each have required two-tenths of a migrant. In the probabilistic model, however, this difficulty does not exist.

*Local migration* (C). Twenty percent of the Negro families of each block, rounded off to the nearer whole number, are now taken as potential migrants. The rounding off yields a total of nineteen families who will try to migrate from the blocks, as indicated by the italic numerals in Figure 6. To illustrate, let us consider migration from the three blocks identified by $a$, $b$, and $c$ in the bottom row. Random numbers are now needed to match against the migration probability field, Figure 3. Let the random numbers now obtained from the table of random numbers be 49, 75, 14, 50, 36, 68, 26, 12, and 33. The first migrant from $a$ is represented by the random number 49. This provides a location one block to the left of the migrant's origin, $X$, to $d$. The second migrant's random number, 75, provides a location two blocks down and one to the left, which is beyond the study area. We interpret this as moot, as though he were replaced by another migrant from outside the area. The third migrant's number, 14, provides a location three blocks up, location $f$. Since this block has no Negroes, this is only a contact, and no move is made at the time. This is indicated by a dashed line. Now let us proceed to migration from block $b$. The first migrant's number, 50, provides a location one block to the left, in block $a$, and the move is made. The second migrant's number, 36, provides a location one block up, in block $e$, and the move is made. The third migrant's number, 68, provides a location beyond the area. From block $c$ the first migrant's number is 26, a location two blocks up and one to the right. This is an area with no Negroes, and only a contact path is shown. The second migrant's number, 12, provides a location three blocks up and two to the left. This location coincides with the contact made earlier by the third migrant from block $a$, and the move is made. The third migrant's number, 33, provides a location one block up and one to the left, or block $e$ again, and the move is made. The net result of all this migration is the opening of one new block to settlement, the reinforcement of three blocks, and two lost contacts.

**Northward Expansion of the Ghetto in Seattle**

The ghetto in Seattle, with only 25,000 residents, is of course smaller than those in the large metropolises, and it may seem less of a threat to the
FIG. 7 (left)—The ghetto area of Seattle. Source: Census data for the relevant years.

FIG. 8 (below)—Blocks predominantly Negro in the northern part of Seattle's ghetto. Source: Census of Housing, 1960. (Block statistics for Seattle.)
surrounding area. Nevertheless, the nature of expansion does not differ from one ghetto to another, though the size of the ghetto and the rate of expansion may vary.

The expansion of the Seattle ghetto is shown on Figure 7, on which the study area is indicated. From 1940 to 1960 the Negro population in the study area more than quadrupled, from 347 families to 1520. Except for a few blocks just north and east of the 1940 Negro area, expansion was into middle-class single-family houses. To the west, where expansion was least, apartments offer increasing resistance, and to the northwest and along the lake to the east houses reach rather expensive levels. Expansion was easiest along the major south–north and southwest–northeast arterial streets, and northward along a topographic trough where houses and land were the least valuable. The solidity of the ghetto core, the relatively shallow zone of initial penetration, and the consequent extension of the ghetto proper are shown on Figures 8 to 10. As the ghetto became larger and thus more threatening, transition became more nearly solid.

The model was applied to the study area for ten two-year periods, beginning with the actual conditions of 1940 and simulating migration for twenty years. For each two-year period the natural increase of the Negro population was added to the resident population at the beginning of the period. Immigrants were assigned as in the model. Migrants were assigned according to the probability field (Fig. 3) and the rules of resistance. One example of the simulation of migration is shown on Figure 11, for 1948–1950. Typically, out of 147 potential migrants, 131 were successful and 16 made contacts, but only 8 of the movers pioneered successfully into new blocks. The results of the simulation are illustrated by Figures 12 and 13, which summarize the changes within two larger periods, 1940–1950 and 1950–1960.

**Evaluation of the Results**

A comparison of Figures 9 and 12, and 10 and 13, showing actual and simulated expansion of the Seattle ghetto for 1940–1950 and 1950–1960 respectively, indicates a generally close correspondence in the patterns. The actual pattern extended more to the north and the simulated pattern more

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Figs. 9 and 10. Source: Census of Housing, 1950. (Block statistics for Seattle.)
SEATTLE
NORTHERN EXTENSION
OF NEGRO GHETTO

SIMULATION
OF MIGRATION
1948-1960

- Blocks newly entered
- Contacts only

SIMULATED EXPANSION
OF GHETTO
1940-1950

- Area of new settlement
- Area previously settled by Negroes

Figs. 11 and 12
Figs. 13 and 14
to the northwest. A field check revealed that neither the quality nor the value of homes was sufficiently taken into account in the model. Topography, too, was apparently crucial. By 1960 the Negroes were rapidly filling in the lower-lying, nonview land. The ridge and view properties remained more highly resistant. The model did not recognize the rapid movement northward along the topographic trough.

According to the most stringent test of absolute block-by-block conformity the model was not too successful. Less than two-thirds of the simulated new blocks coincided with actual new blocks. However, the model was not intended to account for the exact pattern. Sufficient information does not exist. The proper test was whether the simulated pattern of spread had the right extent (area), intensity (number of Negro families in blocks), and solidity (allowing for white and Negro enclaves), and in these respects the performance was better. The number of blocks entered was close, 140 for the simulation to 151 for the actual; the size distribution of Negro population was close; and similar numbers of whites remained within the ghetto (with the model tending toward too great exclusion of whites). This similarity, rather than conformance, indicated that both the actual and the simulated patterns could have occurred according to the operation of the model. This is the crucial test of theory.

A predictive simulation, as a pattern that could occur, using as the base the actual 1960 situation, was done for the periods 1960-1962 and 1962-1964 (Fig. 14). A limited field check showed that this pattern is approximately correct, except, again, with too much movement to the northwest and not enough to the north. No prediction from 1964 has been attempted, because of risk of misinterpretation by the residents of the area.

Alternatives to the Ghetto

The model attempted merely to identify the process of ghetto expansion and thus helps only indirectly in the evaluation of measures to control the ghetto. We know that such a diffusion process is common in nature—the growth from an origin or origins of something new or different within a parent body. Reduction of this phenomenon would seem to require a great weakening of the distinction between groups, here Negroes and whites, either naturally through new conceptions of each other or artificially by legal means.

In ghetto expansion the process is reduced to replacement of passive white "deserters" by active Negro migrants. Is there an alternative that would
permit the integration of minorities in the overall housing market and prevent the further spread and consolidation of ghettos? Is it possible to achieve stable interracial areas, in which white purchasers, even after Negro entry, are sufficiently numerous to maintain a balance acceptable to both? Three factors have been found crucial: proximity to a ghetto; proportions of white and nonwhite; and preparation of the neighborhood for acceptance of Negro entry. Proximity to a ghetto almost forbids a stable interracial situation. Fear of inundation either panics or steals white residents. Only wealthy areas can maintain any interracial character in such a location, since few, if any, Negroes can afford to enter. Negroes entering areas remote from the ghetto are more easily accepted (after initial difficulties), because the great body of Negroes does not "threaten" neighborhood structures.

The proportion of Negroes in an area is critical for continued white purchasing. Whites are willing to accept 5 percent to 25 percent (with a mean of 10 percent) Negro occupancy for a long time before beginning abandonment—depending on such factors as the characteristics of the Negroes moving in, the proximity of the ghetto, and the open-mindedness of the resident white population. On the other hand, although the Negro is accustomed to minority status, he usually prefers a larger proportion of his own group nearby than the critical 10 percent. Thus a fundamental dilemma arises, and there are in fact few interracial neighborhoods. For cities with low Negro ratios, say less than 10 percent, the long-run possibilities are encouraging, especially with the rise of Negro education and income, increased enforcement of nondiscrimination laws, and the more liberal views of youth today. For urban areas with high Negro ratios, such as Philadelphia, with 20 percent (40 percent in the city proper), it is difficult to imagine an alternative to the ghetto. The same conclusion holds for southern cities. No spatial arrangement, given present levels of prejudice, will permit so large a proportion of Negroes to be spread throughout the city without serious white reaction.

Private interracial projects have begun integration and have been successful and stable, if few in number. From these experiments it has been learned that white buyers in such developments are not unusually liberal but are a normal cross section. Also, the spatial arrangement that permits the largest stable proportion of nonwhites has been found to be a cluster pattern—small,
compact colonies of a few houses—rather than dispersed isolates.22 This makes possible easy contact within the minority group, but also good opportunity for interaction with the white group, while minimizing the frequency of direct neighbors, which few whites are as yet able to accept.

Integrated residential living will become more acceptable as Negroes achieve equality in education and employment, but housing integration will probably lag years or decades behind. At most we may expect an arrest of the extension of existing ghettos, their internal upgrading, and prevention of new ones. Experience certainly indicates a long wait for goodwill to achieve even internal improvement; hence a real reduction in ghettoization implies a governmental, not a voluntary, regulation of the urban land and housing market—that is, enforced open-housing ordinances. Everything short of that has already been tried.

The suggested model of diffusion-expansion still describes the dominant ghettoization pattern. In the future we may be able to recognize an alternative “colonization” model, in which small clusters of Negroes or other minorities break out of the ghetto and spread throughout the urban area under the fostering or protection of government.