

The Geography of Metropolitan Opportunity: A Reconnaissance and Conceptual Framework

George C. Galster and Sean P. Killen
The Urban Institute

Abstract

We present a conceptual framework for metropolitan opportunity and a model of individual decision making about issues affecting youth's future socioeconomic status. Decision making and its geographic context have objective and subjective aspects. Objective spatial variations occur in the metropolitan opportunity structure—social systems, markets, and institutions that aid upward mobility. Decisions are based on the decision-maker's values, aspirations, preferences, and subjective perceptions of possible outcomes, which are all shaped by the local social network (e.g., kin, neighbors, and friends).

We also review the psychological literature on decision making. We hypothesize that the decision-making method varies with the range of opportunities considered: Those with fewer options adopt a less considered method wherein mistakes and short-term focus are more likely. Our review also finds empirical evidence that the local social network has an important effect on youth's decisions regarding education, fertility, work, and crime. Policy implications are discussed.

Introduction

Horatio Alger lies dead in the streets of the inner city. For millions of Americans, the rags-to-riches fable has been reduced to ashes just as surely as have many blocks in South Central Los Angeles and other desperate inner-city communities. What once was a springboard of socioeconomic mobility for generations of people who came there from abroad and from rural areas has for too many been transformed into a pit in which perpetual deprivation and social dysfunction reign.

The exogenous sources of this metropolitan transformation are multifaceted, ranging from industrial restructuring to fragmentation of local political jurisdictions (Badcock 1984; Wilson 1987). These complex issues were discussed at length at the 1993 Fannie Mae Annual Housing Conference and are revisited in other articles in this issue, especially those by Schill and Wachter (1995) and Hughes (1995). This article takes as its

starting point that metropolitan areas are highly spatially differentiated and are becoming more so in two areas:

1. Along indicators of socioeconomic status (Abramson, Tobin, and VanderGoot 1995; Jargowsky 1992; Kasarda 1993; Massey, Gross, and Shibuya 1994)
2. Along indicators of private and public resources and social conditions that are commonly seen as elements of economic opportunity (Coulton and Pandey 1992; Coulton, Pandey, and Chow 1990; Galster and Mikelsons 1995; Massey and Eggers 1990)

These facts raise the central hypothesis motivating this investigation: The geography of metropolitan opportunity is changing in such a way that a growing cadre of inner-city youth are persuaded to make decisions that ultimately lock them into a state of deprivation. But what does “geography of metropolitan opportunity” mean? What are its key components? How does geography shape youth’s crucial life choices? What insights do theoretical and empirical social scientific studies provide here? This article offers some exploratory answers to these questions.

The article is organized as follows. The first two sections present the two components of the overarching conceptual framework that informs The Urban Institute’s ongoing research efforts aimed at better understanding the structure of socioeconomic opportunities facing various groups living in our metropolitan areas. In the first section, we grapple with the notion of opportunity and attempt to give it precise content through the concepts of “opportunity set” and “opportunity structure.” In the second section, we develop a model of youth’s decision making related to education, fertility, work, and crime wherein the role of metropolitan opportunity is explicit. This model is presented in both heuristic and formal mathematical variants.

The third and fourth sections provide empirical support for two crucial assumptions implicit in our conceptual models: (1) that decisions are made on the basis of perceived opportunities and (2) that decisions are influenced by social networks and conditions manifesting themselves at the neighborhood scale—manifestations that, as demonstrated in the companion article (Galster and Mikelsons 1995), vary dramatically within metropolitan areas. Specifically, the third section draws lessons from the psychological literature on decision making and adolescent development that inform and support our theoretical model. It raises the provocative hypothesis that constricting opportunity

may affect choices not only directly but also indirectly, by altering the decision calculus employed. The fourth section surveys the empirical literature related to how elements of the local geographic context in which a youth lives affect his or her choices about education, fertility, work, and crime. The last section summarizes the main conclusions flowing from our conceptual modeling and empirical review and draws implications for public policy.

A conceptual framework for opportunity

Consider first what is meant by “opportunity.” We view opportunity as having dimensions of both process and prospects. Each dimension will be associated with a concept in our model: “metropolitan opportunity structure” and “perceived opportunity set,” respectively. In this section we explain the differences between the process and prospect dimensions of opportunity and relate them to public policy concerns over social equity.

The *process* dimension of opportunity refers to the way markets, institutions, and service delivery systems (e.g., the social welfare or educational system, legal and illegal labor markets, the criminal justice system, or the housing market) utilize and modify the innate and acquired characteristics of participants. The panoply of markets, institutions, and systems that act on and convert personal attributes into outputs affecting social advancement we call the “opportunity structure.” Especially important in the opportunity structure are local social networks (described below), which shape the normative and informational context of decision making.

The *prospect* dimension of opportunity refers to the prospective socioeconomic outcomes (likely streams of future income, consumption, and utility) that people believe will occur if they make particular decisions regarding education or work, for instance. These estimated outcomes will be influenced both by the person’s indelible endowments (e.g., race) and by acquired attributes (e.g., education). But they are also shaped by the person’s subjective perceptions of how the opportunity structure will judge and (perhaps) transform these attributes.¹ This collection of perceived estimated outcomes associated with different

¹ Thus, the model defines “state conditions”; that is, the opportunity structure specifies which personal characteristics matter—and to what degree—in opening up or limiting economic prospects of individuals.

choices—constrained by the opportunity structure facing the individual—constitutes that person’s opportunity set.

When we as a society speak about equal opportunity, we typically do not mean equal socioeconomic outcomes (estimated or actual), but rather that (1) those with equal endowments should be treated equally as they interact with the opportunity structure and (2) some endowments (such as race), which are not the same across individuals, should not be used by the opportunity structure as a basis for unequal treatment. Put differently, the conventional notion of equal opportunity focuses on the process dimension.

We believe that this focus on process is appropriate but is not carried to its logical conclusion. That is, the conventional definition of “equal opportunity” overlooks the geographic dimension.² It says that the markets and institutions with which youth come in contact should treat them equally, without regard to race or gender, for instance. But what if some youth find it difficult to access particular markets or institutions because they live far away? What if some have equal access, but these markets and institutions differ greatly in their resources and policies from those that other youth access? Clearly, if we are to take equal opportunity seriously, we must introduce a geographic element.

The conventional concept of equal opportunity should be expanded beyond equal treatment of equals in a given market or institution to include one of the following:

1. Markets and institutions having equivalent resources and policies across metropolitan areas
2. Households having equal abilities to reside in the particular locations in a metropolitan area where they deem the markets and institutions most desirable

This expanded view of equal opportunity forces one to ask new questions.³ How unequal are markets and institutions across metropolitan geography? How confined are households to certain areas of residence and thus to particular markets and institutions? What are the resulting differences in the environments in

²This is analogous to what has been called “the principle of equality of life chances” (Fishkin 1983).

³Note that this notion of geographic equality conflicts with the notion of geographic efficiency formulated by Tiebout (1956).

which youth of various backgrounds make choices about education, fertility, work, and crime? As suggested above, our initial answers offer little consolation.

But to understand why geographically based inequalities in the process dimension of opportunity lead to severe social consequences, we must better understand how youth make decisions and the role of geography in this decision making.

A conceptual model of youth's life choices in the context of metropolitan opportunity

This section first sketches a heuristic model of youth's life choices that provides an overview of the decision-making process and the roles played by opportunity structure and opportunity set.⁴ Second, it presents the concepts more rigorously in terms of a formal economic model of utility maximization over time, wherein the metropolitan opportunity structure comprises the main set of constraints. Third, it considers explicitly the role of geography in shaping the decision-making process described by the models. Fourth, it describes in overview the central roles of the housing market and the mortgage market in giving opportunity a geographic texture.

At the outset we, like so many others, must acknowledge an intellectual debt to William Julius Wilson, whose *The Truly Disadvantaged* (1987) brought to the fore many of the issues we amplify here. The model that follows is, we believe, consistent with Wilson's views but attempts to extend them on several fronts. First, our framework is more general; it can be used to understand the decisions made by all youth, of which the underclass becomes a special case. We believe that this is an important implicit message: All youth are likely to make different decisions depending on how the opportunity structure manifests itself to them; so-called deviants merely face different constraints. Second, our approach tries to systematize interrelationships (both graphically and mathematically) alluded to by Wilson and emphasizes the role of space and the various markets, institutions, and systems that vary across space. Third, we formalize the dynamics of the system wherein past choices lead to increasingly severe constraints over time. Last, we extract from psychology a variety of lessons to enrich our view of youth's decision making.

⁴ Although this article focuses on youth, many principles are applicable to the decision making of adults as well.

Overview: The heuristic model

We start from the perspective of a young decision-maker, who takes as given at any particular moment his or her personal attributes and the perceived characteristics of the opportunity structure.

The individual's decision inputs. To improve their sense of well-being, youth (adolescents and young adults) make many decisions relating to education, marriage, fertility, labor force participation, and illegal activities.⁵ In making these “life choices” (the box in the upper center of figure 1), individuals draw on their values, aspirations, and preferences (upper left box). Factors such as honesty, diligence, respect for authority and traditional institutions, risk aversion, and ability to plan and sacrifice for the future (and the opposites of these characteristics) are especially relevant to these decisions. Individuals also bring their personal characteristics (lower left boxes) as inputs to the decision-making process. Some are indelible endowments (ascriptive characteristics such as race, ethnicity, and gender), and others (e.g., education, fertility, and income) are malleable, depending on past choices. Personal attributes, in conjunction with constraints imposed by the perceived opportunity structure (arrow B), determine the feasibility of certain options and the prospective benefits associated with each perceived feasible option: the perceived opportunity set (arrow C).

Given their values, aspirations, and preferences (arrow A) and their perceived opportunity set (arrow H), individuals make a series of life choices. As dictated by the actual (as opposed to the perceived or anticipated) operation of the metropolitan opportunity structure (arrow M) and the individual's personal characteristics (arrow N), the particular combination of choices made will produce some level of achieved socioeconomic status during any given period (arrow E).

Metropolitan opportunity structure. The key elements of the metropolitan opportunity structure (shown as boxes on the right side of figure 1) are housing, mortgage, criminal, and labor markets; local political, criminal justice, social service delivery, and educational systems (public and private); and local social networks. All these separate elements are bound in an immensely complicated nexus of causal interrelationships. Suffice

⁵ For a somewhat different, but essentially complementary, model of outcomes for children, as mediated by personal, family, and community variables, see Lehman and Smeeding (1994).

it to note here that the connections between housing and mortgage markets are of paramount importance and are analyzed by various authors in this Fannie Mae Conference issue. Of course, operations of the opportunity structure objectively vary greatly across individuals, depending on their personal characteristics and how these characteristics are evaluated by the markets and institutions operative in the individual's place of residence.

Information and perceptions. Decision-makers' subjective perceptions of particular elements of the opportunity structure with which they have not had firsthand experience and of the overall opportunity set will be crucially shaped by the information they have at hand. (The perceptual filter through which the opportunity structure and set are viewed is represented by a dashed line in figure 1.) Some information is conveyed by the mass media (arrow K). Another source of information, frequently overlooked, is the network of family, neighbors, friends, kin, and more formal local institutions such as clubs, associations, and religious organizations—what we call the “local social network.” Like Wilson (1987), we see the local social network component of the metropolitan opportunity structure playing an important role in providing, evaluating, and shaping the information that guides perceptions (arrow I). Similarly, the local social network may reinforce certain norms and values or act on youth's aspirations in a variety of ways (arrow J; see Anderson 1980; MacLeod 1987; Rodin 1985; Sullivan 1989).⁶

Dynamic elements. Earlier choices and achievements may reshape individuals' current aspirations and preferences (arrow F). For example, a woman's prior choice to raise children may currently intensify her aversion to risky criminal ventures or her weighing of the opportunity cost of school attendance. Similarly, if past choices to seek legitimate employment have been consistently frustrated, present ability to plan and invest and respect for civil authority may wane. Thus, unlike some traditional economic models, our model treats aspirations and preferences as potentially malleable over time, depending on past choices, local social networks, and the previous operation of the metropolitan opportunity structure vis-à-vis that individual.⁷

⁶ A well-known illustration of these points is Wilson's (1987) arguments about the effects of “social isolation” on norms, aspirations, role models, and information for ghetto youth.

⁷ A referee has suggested that variable preferences can be justified by a “learning by doing” framework. Note, however, that many valuable contributions by economists have been made by positing fixed preferences, and the overall spirit of the present model would not be altered by this assumption.

Previous choices may also create cumulative effects. For instance, a past choice about staying in school (arrow M) combines with the decision-maker's personal characteristics and the actual operation of the educational system (arrows N and E) to define a current (malleable) personal characteristic (educational attainment and quality) that, in turn, will influence (arrows D and B) the current range of perceived labor market opportunities (Hutchens 1994). Similarly, past decisions about fertility and crime can foreclose various options for educational attainment and work (Viscusi 1986).

Yet another dynamic feature implicit in this formulation is intergenerational effects. Recall that "family background," a generic term encompassing familial wealth, education, marital stability, values, and other characteristics, is treated as an indelible personal characteristic from the perspective of a particular youth decision-maker. If this youth chose to start a family, his or her current and future socioeconomic status, values, and so forth would provide input for his or her child's characteristics and decisions later in life. Thus, the model elucidates how constrained opportunity structures can lead to choices by one generation that encourage the formation of a new generation whose indelible characteristics might limit their opportunity sets, even when opportunity structures might be less constraining (Case and Katz 1991).

Finally, the urban opportunity structure itself is malleable over time. Although a full discussion of this point is beyond the scope of this article, an illustration is appropriate. For example, the educational background of the parents of students living in a school district constitutes an important element of educational opportunity functions. Better educated parents are thought, for example, to create more intellectually stimulating home environments, to monitor more effectively the completion of homework, and to demonstrate more interest in what goes on in school and therefore improve the quality of the classroom environment for all students. If, therefore, in response to inferior public education, youth choose little education, remain in the same school district, and eventually become parents, the quality of the school system and the educational opportunity available to students will diminish over time (arrow G).

The formal model

We now turn to a reconsideration of opportunity and the heuristic understandings of decision making. This reconsideration takes the form of an economic model of expected utility maximization.⁸

We present the model first from the standpoint of an individual who employs the “rationalist” model of decision making. Below we will consider implications of relaxing this assumption. We assume that the youth here seeks to maximize the expected present value (based on imperfect information) of a future stream of utility U by choosing the following:

1. An optimal allocation of time T among leisure, education e , and income-producing activities of work l and crime c
2. An optimal number of offspring h , based on child rearing’s status and the value of companionship they provide in comparison with its influence on the parent’s ability to obtain education, work, and welfare

The amount of time devoted to legal labor during period t (l_t) will be rewarded with per-unit compensation p_l , producing legal income I_{Lt} ; the amount of time devoted to crime during period t (c_t) will be compensated at a rate of p_c , producing illegal income I_{Ct} . The amount of income that can be gained from social welfare transfers (cash and in kind) is I_{Wt} . Income is used to purchase a quantity of consumption z_t at a price p_z per unit. The person has endowments or indelible ascribed characteristics $[X]$.

We consider five components of the opportunity structure as critically constraining the maximization: education, the legal labor market, the criminal justice system, the illegal labor market, and social welfare. (A sixth component, the local social network, is given special treatment below because of its unique role.) Each component takes as input the endowment $[X]$ and the acquired characteristics of people with whom it comes in contact and yields an output associated with the components. Education produces “educational quality” Q ; the labor market produces income I_L ; the criminal justice system produces sanctions S in the form of income penalties; the criminal market produces illegal income I_C ; and social welfare produces support payments

⁸ We note at the outset that the development of this formal model owes a large debt to Isaac Megbolugbe’s seminal contributions, while not implicating him in any shortcomings that remain.

and the value of in-kind goods and services equal to I_W . Let this transformation or production-like process be denoted by the functional notation f . Then the above components of the opportunity structure can be denoted f_E, f_L, f_J, f_C , and f_W , respectively. These symbols can be employed to express our notion of opportunity more precisely and succinctly.

We emphasize at the outset that although all functions are presented below as if they were objectified, it is their features as perceived by decision-makers that will be of ultimate importance. Because local social networks are the main contributor to this subjective reality, they are a vital component of the opportunity structure. Our model assumes that the opportunity structure is exogenous to the individual decision-maker.

Consider first the opportunities associated with acquiring education that, in turn, is ultimately used in acquiring income through the legal labor market. Let educational quality Q be defined as the level of skills (both vocational and general) attained by a person. Q is a function of the endowments $[X]$ and educational attainment Σe_t of the individual. The particular form of the mapping function f_E depends on a host of attributes of the public and private school environment, such as school financial resources, student body composition, educational background of parents, curriculum, facilities, and peer group influences in school and the neighborhood.

Symbolically, the educational component may be expressed as follows:

$$f_E : \Sigma e_t, [X] \rightarrow Q_t. \tag{1}$$

Given that a particular accumulated educational attainment Σe_t and associated accumulated skill level ΣQ_t have been achieved, certain labor market activities present themselves to the decision-maker. How these educational attributes will translate into wages p_l will depend on indelible personal endowments $[X]$, such as race, gender, and age, and on acquired attributes such as accumulated criminal record ΣS_t and labor experience Σl_t . The amount of labor time l_t will also depend on the availability of nonwage sources of income; here we consider only social welfare I_W .

Symbolically, the labor market component may be expressed as follows:

$$f_L : l_t, \Sigma Q_t, \Sigma e_t, [X], \Sigma S_t, \Sigma l_t, I_{Wt} \rightarrow p_l l_t = I_{Lt}. \tag{2}$$

The effect of the criminal justice system is modeled as a function mapping the time spent committing crimes c_t to the expected severity of penalty, conditional upon being arrested and convicted. The expected value of this sanction, S_t , will vary according to the characteristics of the criminal justice system in the local jurisdiction, including the use of mandatory sentencing and the effectiveness of the police force and prosecutors in arresting and convicting criminals.

Symbolically, the criminal justice system component may be expressed as follows:

$$f_J : c_t \rightarrow S_t. \quad (3)$$

Participation in the criminal market potentially produces illegal income. The exact form in which time c_t and personal attributes $[X]$ combine with the threat of sanctions to generate illegal income will be influenced by competition from other criminals and by how resistant potential targets are to property crime. The amount of time devoted to crime will also depend on the opportunity cost of legal income forgone, I_{Lt} .

Symbolically, the criminal market component may be expressed as follows:

$$f_C : c_t, [X], I_{Lt}, S_t \rightarrow p_c c_t = I_{Ct}. \quad (4)$$

Finally, consider the acquisition of income from the social welfare system, I_{Wt} . The probability that a young woman will qualify for Aid to Families with Dependent Children (AFDC) and other forms of welfare (including subsidized housing) in any period is a function of her marital status $[X]$, fertility behavior h_t , and (presumably reported) legal income I_{Lt} . The prospects for young men receiving substantial, long-term benefits from the social welfare system are typically less than for young women. Nevertheless, young men might also consider prospective sources of I_{Wt} through general assistance, food stamps, unemployment insurance, and housing subsidy programs that, in turn, would be related to their recent wage income I_{Lt} . Once a person qualifies for welfare, the amount of welfare benefit in any period t will be determined by the policies of the given jurisdiction.

In sum, the welfare system component may be expressed symbolically as follows:

$$f_W : h_t, [X], I_{Lt} \rightarrow I_{Wt}. \quad (5)$$

The final component of the opportunity structure modeled here is local social networks: the myriad of kin, friends, and formal and informal associations that compose the social milieu of the decision-maker. This component will be examined in greater detail below; suffice it to note here that its role is distinct from the prior five components because it shapes the subjective context in which the other five are viewed. That is, local social networks form a conduit through which information about f_E , f_L , f_J , f_C , and f_W is filtered and assessed. The networks also perform a socialization function and thus contribute to the decision-maker's utility function parameters. Let this informational and normative filter represented by the local social network be labeled f_N .

Now we are ready to return to the notion of opportunity and specify it more formally. An adolescent (or adult) faces a feasible array of utility-generating possibilities. One subset of possibilities involves expected streams of future legal labor income I_L , perhaps with or without more educational attainment than currently. Another subset involves expected streams of future illegal income I_C , perhaps with or without more education. For women in particular, another subset involves expected streams of future welfare income I_W associated with childbearing, no husband, and little legal income.

This array of feasible expected values of utility formally defines the individual's opportunity set. The various functions f that embody the operations of the labor market, criminal market, educational system, justice system, welfare system, and local social networks together formally define the constraints imposed by the opportunity structure in which the individual operates. Subject to these constraints, the "rational" individual seeks to maximize the (discounted) expected utility by choosing the appropriate allocations of time among education, work, and crime and the appropriate amount of childbearing corresponding to the maximum-utility outcome.

In summary, the formal model can be expressed (in its most general form) as follows:

$$\begin{aligned} \text{Maximize } & \sum_t (1 + \beta)^{-t} U_M(z_t, S_t, T - e_t - l_t - c_t) \\ & \{e_t, l_t, c_t, h_t, z_t\}, \end{aligned} \tag{6}$$

$$\begin{aligned}
\text{subject to } & f_E : e_t, [X] \rightarrow Q_t, \\
& f_L : l_t, \Sigma Q_t, \Sigma e_t, [X], \Sigma S_t, \Sigma l_t, I_{Wt} \rightarrow p_l l_t = I_{Lt}, \\
& f_J : c_t \rightarrow S_t, \\
& f_C : c_t, [X], I_{Lt}, S_t \rightarrow p_c c_t = I_{Ct}, \\
& f_W : h_t, [X], I_{Lt} \rightarrow I_{Wt}, \\
& p_z z_t \leq I_{Lt} + I_{Ct} + I_{Wt} - S_t,
\end{aligned}$$

$$\text{and } f_N \rightarrow f_E, f_L, f_J, f_C, f_W, \beta^t, U_M,$$

where t denotes a time period; T is the length of period t ; β^t is the discount rate; U_M is utility function of a person with malleable and indelible characteristics M ; e_t is the amount of time (labor) put into education during period t ; l_t is the amount of legal labor; c_t is the amount of illegal labor; $T - e_t - l_t - c_t$ is residual leisure time; h_t is number of dependents at time t ; z_t is the quantity of private market goods; p_l and p_c are the wages of legal and criminal labor, respectively; and p_z is the price of private goods.

The rational youth maximizes the sum of discounted utility by making life choices about education, labor types, fertility, and consumption goods subject to perceived constraints imposed by the metropolitan opportunity structure and the standard market budget constraint. Of course, it strains credulity to posit that all youth conduct such a rational, multioption, multiperiod optimization as part of their decision calculus. Nevertheless, there is evidence to suggest that various behaviors modeled here are guided by calculations of relative returns and risks associated with various options (Fagan 1992; Freeman 1992; Viscusi 1986). As indicated in the next section, however, a variety of decision-making styles have been observed. One especially provocative finding is that the style may depend on the variety of feasible options perceived. Thus, youth perceiving few, if any, feasible options for higher education and high-wage legitimate employment and whose social environment teaches them present orientation (i.e., a reluctance to sacrifice and plan for the future, manifesting itself as a high rate of time discount β) may opt for only a partial, single-period solution to the problem described in equation (6).

Although the maximization problem is presented as if it were a static, once-only exercise, it could better be seen as a dynamic one. That is, at a certain time t a youth with attributes M and a particular future orientation reflected in β^t will make a choice involving the various elements described in equation (6).

Experience, new information, and achievement based on this choice may well change the parameters in a subsequent period, whereupon the decision calculus embodied in equation (6) may be activated again to perform a midcourse correction.

Role of geography in shaping decisions

Geography can shape life decisions in two ways in our model: (1) objective spatial variations in many components of the opportunity structure and (2) subjective spatial variations in values, aspirations, and preferences and in perceived opportunity sets, due to spatial variations in the local social network. In other words, perceptions might match reality perfectly, but reality varies geographically. Or reality might not vary geographically, but perceptions of it do. We consider both in turn, examining the scale at which the given feature varies geographically.

Spatial variations in opportunity structure. We stress at the outset that there is no single geographic scale over which the metropolitan opportunity structure varies. On certain dimensions it may be relatively invariant across an entire metropolitan area, varying only from one metropolitan area to the next. More likely, certain dimensions vary across municipal jurisdictions and others vary across census tracts within municipalities. (The census tract scale is the subject of explorations in the companion article, Galster and Mikelsons 1995.) Still others may vary at even smaller scales. Below we consider the theoretical and empirical evidence related to spatial scales of variation for different components of the opportunity structure.

The metropolitan labor market is generally considered congruent with the bounds of the metropolitan region, and many features shaping f_L , such as unionization or overall labor demands, are invariant across this scale. But there are likely variations in how particular features of the labor market present themselves to prospective workers residing in different locations within a metropolitan area (Holzer 1994).

The most widely debated example is the well-known “jobs-residence” or “spatial mismatch” hypothesis (Hughes 1995; Kain 1992). Less investigated but equally plausible illustrations include the following:

1. Discrimination on the basis of reputation of high school (Kirschenman and Neckerman 1991)

2. Intraurban spatial variation in the intensity of racial, ethnic, or gender discrimination (Yinger 1991)
3. Intraurban spatial variation in information about job vacancies, especially variations associated with local social networks

Unfortunately, there is little empirical work to guide us about the degree to which the above vary over space and the scale over which sizable variation occurs; here it is probably greater than a neighborhood but smaller than a metropolitan area.

The criminal market's features similarly are little known. In principle, the perpetrators of property crime could operate over an entire metropolitan area to find targets. In practice, however, many income-generating crime markets—especially visible ones like drugs—seem to be more localized (Galster and Mikelsons 1995; Gottfredson and Hirschi 1990); young decision-makers in or near such localized crime markets will gain very different information about and thus have a very different perception of f_C . We suspect that this component of the opportunity structure varies at the neighborhood scale.

Public education is an institutional structure that clearly varies dramatically in quality across school district boundaries. Interdistrict differences in school financial resources, student body composition, parental education, curriculum, facilities, and peer group influences make for differences in the education opportunity function f_E (Kozol 1992; Orfield 1992). There may be *intradistrict* variations as well, but the prevalence of district-wide student assignments weakens the connections between such variations and residential location. Inasmuch as private schools serve different segments of the population and their variation in quality is not well known, this component of the opportunity structure remains ripe for research.

The criminal justice system probably varies spatially in metropolitan areas both between and within jurisdictions. Differences in local fiscal capacity, policy, and court procedures can produce significant variations in f_J among municipal jurisdictions in the same metropolitan area. But further gradations have been noted within the same jurisdiction. The enforcement efforts of the “war on drugs,” in particular, have been focused on relatively few neighborhoods (Associated Press 1992). The result has been that a young drug pusher will likely perceive a spatially variant probability of suffering sanctions from the criminal justice

system, depending on where within a jurisdiction the drug business is conducted.

Finally, variations in the social welfare system, usually minor, occur across municipal jurisdictions within a metropolitan area. Many benefit levels, such as those for AFDC, vary only across states; thus only multistate metropolitan areas would experience such variations. Yet municipalities such as New York City spend considerably more on their own welfare programs than adjacent municipalities in the same state do, so some intermunicipal variation in f_w is also likely.

Spatial variations in local social networks. One of the main functions of neighborhood is socialization (Hunter 1974): the inculcation of the predominant group's norms, values, and acceptable behavioral patterns into the young. Although there is evidence that socialization through local spatial neighborhoods has declined in significance as patterns of social intercourse have become more spatially diffuse (Wellman 1972), it is equally clear that many close-knit geographic communities remain. The point is that the influence of neighbors on the development of youth can range from negligible to overwhelming, depending on the particular residential context in which youth find themselves. The way some groups of "concerned parents" fight the movement of "undesirable" households into their neighborhoods provides testimony to their belief in the potent role of neighborhoods' socialization effects.

Another spatially variant aspect of local social networks is their potential informational function. If, for example, more neighborhood residents are employed, they are more likely to be sources of information about job vacancies for their unemployed neighbors; if more are on welfare, they are more likely to be sources of information about how that system operates and what benefits it provides (Holzer 1988).

But this transmission function is rarely free of distortion. Indeed, messages are always filtered through the transmitter's own values, aspirations, and experiences. Thus, the edited version of information about the opportunity structure, complete with evaluative commentary, is what the local social network provides for the decision-makers. If, for example, word of a potential job vacancy is accompanied by the suggestion "But there'll be a million folks applying, so don't bother," the behavioral effect is likely to be quite different from what it would be without the warning.

Central role of housing and mortgage markets

We have argued thus far that youth's decisions regarding education, fertility, work, and crime are made on the basis of their values, aspirations, and preferences, in conjunction with their perceptions of their opportunity set. Objectively, the components of the opportunity structure that yield the opportunity set vary at different spatial scales across the metropolitan area because of the operation of the education system, labor market, crime market, social welfare system, and criminal justice system. Subjectively, values, aspirations, preferences, and the apparent operations of these components are further shaped by spatially varying local social networks. The upshot of all this is that two youths with identical personal characteristics are unlikely to make the same life decisions if they reside in different parts of the same metropolitan area.

Now one might accept all the above but argue nevertheless that opportunities were equal so long as parents were free to live anywhere they chose in that metropolitan area. Of course, they have no such freedom, given the severe segregation of dwellings by price or rent ranges (Vandell 1995) and the resultant spatial polarization of households on the basis of socioeconomic status (Abramson, Tobin, and VanderGoot 1995). There is also abundant evidence that racial-ethnic discrimination in both housing and mortgage markets further constrains the residential choices of many (Galster 1992; Schill and Wachter 1995).

The role of the housing and mortgage market is thus central to the notion of the geography of metropolitan opportunity. Were the housing market naturally capable of producing a less spatially segregated distribution of housing prices and rents (see Vandell 1995) and were discriminatory actors and local political systems less willing and able to affect this distribution (see Schill and Wachter 1995), this issue would be rendered insignificant. Inasmuch as homeownership affords a household more spatial options than renting does, the ability of the mortgage markets to perform in ways that enhance the potential for homeownership also becomes a crucial issue.

Put differently, if all households feasibly could choose to live in any part of the metropolitan area, regardless of income, race, or ethnicity, a spatially varying opportunity structure would be less of a public policy concern because, presumably, people could sort themselves spatially to take advantage of what they perceived as the best locations. Of course, the opportunity structure is not exogenous to households' residential choices, as symbolized by

arrow G in figure 1. Indeed, upper income households have a perceived advantage in clustering to provide homogeneous public schools, especially if they can accompany clustering with the fiscal advantage of a separate political jurisdiction that practices exclusionary zoning (Tiebout 1956). Thus, the spatial segregation of housing by affordability ranges and the resulting segregation of classes, plus the additional discriminatory segregation based on race and ethnicity, create spatial patterns in the opportunity structure and make it difficult for households to respond to perceived patterns by moving to preferable locations.

Nature and determinants of decision making: Lessons from psychology

Thus far we have presented the overarching conceptual framework that formalized our notion of metropolitan opportunity and developed a model of decision making in response to perception of opportunity. This model implicitly assumed that human decision making, at least when it came to crucial life choices, was made on the basis of “bounded rationality”: that impressionistic perceptions of feasible options and their associated payoffs influenced choices. Is there any empirical basis for this formulation? In this section we review the relevant evidence and come to an affirmative conclusion. We also stress at the outset that this review clarifies the many ways the local social network component of the metropolitan opportunity structure affects youth’s decisions and the decision-making process itself.

Contingent decision making: Overview

The ability to solve problems, to confront challenges daily, is one of the most important of all human characteristics. Individual efficacy in decision making differs, but this ability undeniably shapes the choices, and consequently the actions, of each person. The rational decision-making model, in which choices between options and their attributes are made by analytically considering the costs and benefits of each option (e.g., childbearing weighed against further educational attainment), captures the decision-making process conventionally posited by economists. However, Simon (1955) argued that to understand human decision making better would require an understanding of the limits of human information processing.

While humans will attempt to make rational decisions—hoping for outcomes that are most beneficial in terms of their needs,

beliefs, and values—the psychological literature suggests that people most often engage in “contingent decision behavior” in which contextual factors influence the strategies used in making choices (Payne, Bettman, and Johnson 1992). The contingent decision approach allows for the use of various decision-making strategies in different contexts.⁹

Elements of contingent decision-making context

This section examines contingent decision making in more depth and considers the factors that influence it: malleable preferences, conflicting values, information complexity, uncertainty about preferences and future outcomes, and time constraints. A recurrent theme will be the role of local social networks in shaping these factors. Finally, it raises the intriguing proposition that the extent of perceived opportunities affects not only choices, but the style of decision making itself.

Malleability of preferences. Preferences guide decision making in our model, but evidence suggests that these guides are also “constructed” to a degree during the decision-making process (Slovic, Griffin, and Tversky 1990). The human memory is incapable of maintaining a master list of concrete preferences or a comprehensive catalog of past decisions. This limited ability introduces error, and the possibility for evolution, into the decision-making process (Payne, Bettman, and Johnson 1992). So, although individuals hold certain preferences that do affect their choices, prior actions and new information (filtered through local social networks) interact in the decision-making process to produce new actions (see figure 1, arrows M, E, F, and J).

Conflicting values. Conflict between values tends to arise when none of the available options meets all the individual’s preferences (Payne, Bettman, and Johnson 1992). In two-value cases, people generally use a system of weights, trading a greater amount of one valued attribute (e.g., salary) against less of another valued attribute (e.g., location) until a satisfactory balance is achieved. If a young male living in the central city believes that both a high level of educational attainment and current financial status are important (conflicting values), he is forced to decide between the deferred rewards of education and

⁹ Research concludes that the repertoire of decision-making strategies is developed in various ways—through formal training (Larrick, Morgan, and Nisbett 1990) or experience (Kruglanski 1989)—but the availability of these heuristics depends greatly on the frequency and recency of prior use (Ginnosar and Trope 1987).

the immediate benefits of leaving school to seek employment or entering the criminal economy. These conflicting values are resolved on the basis of input from the local social network and the perceived opportunity set available to the young man.

Informational complexity. Higher informational complexity increases the use of simplifying heuristics. Perceptual variation in the observation of the problem—either between individuals or within one person between problems—seems to result from human limitations in information processing. Individuals use “selective attention” to subsets of information when complexity increases, but this heuristic does not always select the most important information, a decision-making occurrence that can be mitigated with training (Gaeth and Shanteau 1984). We hypothesize that the dominant norms and values of a local social network help determine the sorts of information selected for attention.

Uncertainty about preferences and future outcome. Regarding uncertainty, Payne, Bettman, and Johnson (1992, 99) note that “rational choices involve two kinds of guesses”: those related to the expected consequences of current choices and those related to the preferences for those consequences. The main difficulty occurs when the consequences of two alternatives happen at different times. Kahneman and Snell (1990) note that people have difficulty evaluating the usefulness of future consequences. The risk inherent in a decision-making process also affects the outcome. Heightened risk results in greater use of simplifying decision-making heuristics and a concomitant increase in error. This further attests to the crucial role played by local social networks. A decision-making environment that provides more information and many role models attesting to the value of future orientation will reduce the perceived risk of deferred payoffs and will thus reduce the use of more error-prone, simplifying heuristics.

Time constraints. Implicit in the literature is a comparison of intuitive and analytical decision making and how the analytical method is chosen when time is limited. Payne, Bettman, and Johnson (1992) observe that many decisions involving only a single alternative (e.g., whether to have sex, whether to attempt a robbery) are made automatically, rapidly, and with low cognitive control—intuitively—and correspond to the individual’s self-image. Such single-alternative choices are confronted by all adolescents, but if a youth’s neighborhood reports an inordinately high number of teenage pregnancies or crimes committed by adolescents, the opportunities for a faulty intuitive decision

with serious ramifications are much higher than in an upper-class neighborhood in which the most serious choice faced is whether to stay out past curfew. These low-effort decisions result in more numerous mistakes than the more analytical processing mode typically used when multiple alternatives exist. These mistakes remain on the individual's record, influencing future opportunities and decisions: The young man arrested for robbery limits his future opportunities in education or the legal labor force, for instance.

Opportunity and the decision-making process

What warrant further examination are the individual differences in opportunities that lead to different decision strategies, as well as different outcomes. Our options are limited both by the very real social and economic conditions of our existence and by the limitations we perceive regardless of the accuracy of those perceptions. Few people have a wide variety of options in life—a luxury that is often accompanied by the opportunity to correct faulty decisions. For example, the decision to invest one's savings badly requires that one possess the means to acquire savings. Most people live a life in which options are limited and faulty decisions are costly.

Payne, Bettman, and Johnson (1992) note two important features of decision making that become exceptionally important given these disparities in opportunity: (1) Increased options with greater certainties of payoff encourage a more analytical style of decision making, and (2) snap judgments often lead to poor choices. These features are linked in that a lack of options creates a situation in which snap judgments are more frequently used. A more analytical approach, however, certainly seems to be better suited to making life decisions that have multialternative, future-oriented attributes. The procedural difference between snap judgments and an analytical choosing style has, of course, crucial implications for adolescents.

Local social networks and empirical studies of neighborhood effects

The previous section provided a review of the theoretical and empirical psychological literature that strongly suggested that what we have summarized as the local social network plays an important role in shaping the decision-making strategy used, thereby leading to different life choices. In our conceptual model,

we also suggested that the local social network could influence the informational input of the choice process and provide a normative context for evaluating outcomes. Thus, through a variety of mechanisms, the local social network component of the opportunity structure is likely to affect the life decisions of youth.¹⁰

This prediction has been supported by a number of studies that come out of the “neighborhood effects” or “peer group influence” literature (for reviews, see Jencks and Mayer 1990a; Lehman and Smeeding 1994). In this section we summarize this literature, grouped by outcome being investigated. Note that the studies briefly summarized below approach the study of neighborhood effects from a statistical-behavioral perspective. No less persuasive evidence comes from recent ethnographic analyses that reveal the complex, often idiosyncratic dimension of neighborhood-based culture and social networks that appear to have strong effects on a wide range of youth’s (subjective) aspirations and perceptions, as well as (objective) behaviors (Anderson 1980; Fernandez and Harris 1992; MacLeod 1987; Ready 1991; Sullivan 1989; Williams and Kornblum 1985, 1994).

Childhood intellectual development

Much research has linked the home environment with cognitive development in children (e.g., Clark-Stewart and Apfel 1979; Wachs and Gruen 1982). Bernstein et al. (1988) summarize findings in this area, saying that children develop faster and perform better when their environment is stable, stimulating, and socially supportive.

Brooks-Gunn et al. (1993) quantified the significant effects of both parental and neighborhood environment on children’s development. They used the Panel Study of Income Dynamics (PSID) to observe neighborhood-level poverty between 1979 and 1984, using a sample of 1,364 black and white children aged up to 3 years in 1980. The PSID has poverty data at both the neighborhood (tract) and family levels. They also used the Infant Health and Development Program, which randomly samples low-birth-weight babies from each of eight sites and observes the effects of educational, medical, and family support services on developmental outcomes. Poverty, single-female-headed

¹⁰ Several potential mechanisms have been identified by Jencks and Mayer (1990a, 1990b). We find our view most consistent with those they label “epidemic,” “collective socialization,” and “institutional.”

households, minority racial and ethnic status, and low maternal education were all linked to poor cognitive development (demonstrated to impair decision making), low educational attainment, and behavioral problems for children. More important for our purposes, IQs at age 5 were higher for children living with higher concentrations of affluent neighbors (people with incomes greater than \$30,000 yearly), even when the researchers controlled for family background.

Education

A substantial body of evidence has arisen indicating that poverty-stricken, segregated environments discourage educational attainment. The Gautreaux program in Chicago produced significant differentials in educational attainment depending on which part of the metropolitan area the black welfare families moved to. These important results are not reviewed here because they are the subject of another article in this issue (Rosenbaum 1995).

Garner and Raudenbush (1991) observed educational attainment in Scotland among 2,500 people who left school between 1984 and 1986. They linked survey data with area data from the 1981 Census of Population. The authors used nationwide standard exam scores as a measure of attainment. Controlling for pupil ability, family background, and schooling, they found significant negative relationships between neighborhood deprivation scores and individual educational attainment.

Crane (1991) used a 1970 Public Use Microdata Sample (PUMS) to examine teenagers (ages 16 to 19) living with their parents. He considered dropping-out-of-school behavior, using a sample of 92,512. Crane contends that social problems spread in a neighborhood like a disease, so terms like “contagion” and “epidemic” are appropriate. He holds that at a certain threshold, social problems begin to increase exponentially rather than additively. He concludes, even after controlling for individual characteristics, that adolescents of all racial-ethnic groups are exposed to higher risks of dropping out of school as the neighborhood percentage of workers in professional or managerial occupations declines. For black and white teens, the risk rises greatly when the neighborhood drops below 3.5 percent middle-class workers.

Clark (1992) used a data sample of 22,534 males between the ages of 15 and 18, selected from the 5 percent sample of the

1980 census. Clark did not find Crane's nonlinear "epidemic" effect, but concluded that both the "bad" and (to a greater extent) the "good" dimensions of a neighborhood affected male dropout rates. The effects were somewhat smaller for black males, however.

Haveman and Wolfe (1994) explored PSID data on about 1,700 children from 1967 to 1988. Controlling for a wide variety of parental and family background characteristics, they identified statistically significant relationships between school attainment and growing up in "bad" census tracts (in which more than 40 percent of the youth were high school dropouts, more than 40 percent of families were headed by single women, and less than 10 percent of employed persons held professional or managerial jobs) as compared with "good" tracts (in which less than 10 percent of the youth were dropouts, less than 10 percent of the families were headed by single women, and more than 40 percent of the employed persons held professional or managerial jobs). Their estimates suggested that if those who grew up in bad neighborhoods had grown up in good ones instead, the probability of their dropping out of high school would be 52 percent less and their mean years of education would be 6 percent higher.

Duncan's (1994) work raises the intriguing possibility that neighborhood effects on educational attainment are not uniform across all gender and racial groups. He used PSID data to explore the effect of neighborhood (census tract) and family characteristics on schooling completed (expressed alternatively as number of years and probabilities of completing high school or college). Higher female employment rates in the tract reduced college attendance rates for white and black women, and higher proportions of female-headed households in the tract increased dropout rates of black women. Higher percentages of affluent neighbors led to higher rates of college attendance only among white males; they led to greater numbers of schooling years for all groups except black males. For black males, the most significant deterrent to completing high school was the percentage of black residents in the neighborhood; the greatest deterrent to completing college was the percentage of low-income neighbors.

The study by Dornbusch, Ritter, and Steinberg (1991) focuses on school performance. Their sample was more geographically localized than those used in the studies above, but it included additional data on parenting style, involvement, decision making, and reaction to children's grades. They found that an aggregate indicator of census tract socioeconomic status was a highly

significant predictor of students' self-reported grades, especially for black students.

Marriage and fertility

Several studies have investigated neighborhood correlates of female fertility behavior, controlling for family background characteristics. Neighborhood effects have been consistently observed. Crane's (1991) study also investigated a 1970 PUMS sample of 44,466 female teens ages 16 to 19 living with their parents. As with his results for dropout rates, he found large increases in childbearing probabilities for both blacks and whites in neighborhoods with less than 3.5 percent professional or managerial workers; for blacks there was a continued (but weaker) inverse relationship at higher percentages of such workers.

Hogan and Kitagawa (1985) constructed a 1979 Chicago sample of unmarried black females between ages 13 and 19. Using a composite measure of "neighborhood quality" (poverty rate, median family income, male-female ratio, number of children per ever-married female, juvenile delinquency rates), they found that the chance of becoming pregnant in the lowest quality neighborhoods was a third higher than in all higher quality ones, controlling for social class, parents' marital status, and number of siblings.

The Haveman and Wolfe (1994) study also investigated neighborhood effects on teenage out-of-wedlock births. Their estimates suggested that if those who grew up in bad neighborhoods grew up in good neighborhoods instead, their probability of having such births would fall by 18 percent. This result was not statistically significant, however, so no firm conclusion could be drawn.

Massey, Gross, and Eggers (1991) used 1980 PUMS data to model the probability of young women heading families with children in the 50 largest metropolitan areas. Independent variables included personal characteristics and census tract poverty rates. The effect of neighborhood poverty was modest for women ages 15 to 18 but very strong for women ages 19 to 30. The authors used their statistical estimates to simulate what proportions of female-headed households would be under different assumptions about factors thought to contribute to concentrated poverty, such as racial segregation. Assuming an average degree of residential segregation, increasing the neighborhood's poverty rate from 9 to 32 percent was predicted to increase the

probability that a 19- to 30-year-old black woman headed a single-parent family from 23 to 33 percent.¹¹

Case and Katz (1991) used National Bureau of Economic Research data on 1,200 disadvantaged youth ages 17 to 24 in Boston. Controlling for personal characteristics and parental background, they found only a modest correlation between the probability of being a single parent and the rate of teenage single parenthood in the surrounding two-square-block area. They estimated that teenage females in a neighborhood with a 10 percent higher teenage single parenthood rate would have a 1.6 percent higher probability of being a single parent, all else being equal.

Brewster (1994) investigated sexual activity among adolescent women, using individual- and aggregate-level data to examine the relationship between risk of first intercourse and a variety of neighborhood characteristics. She employed the 1982 National Survey of Family Growth for women ages 15 to 19, in conjunction with census tract characteristics. Her hazard model analysis revealed that the tract's rate of female full-time employment was positively associated with risk of experiencing nonmarital first intercourse, controlling for age, race, religious affiliation, family status, and maternal education. Brewster concluded that neighborhood socioeconomic status, adult supervision, and female role models were important in shaping young women's evaluations of the benefits and costs of sexual activity.

Labor force participation, employment, and earnings

Only a few studies have attempted to undertake rigorous, multivariate statistical analyses of labor force activities and outcomes in which the role of neighborhood could be isolated. Case and Katz (1991), for example, found that youth in a neighborhood with a 10 percent higher rate of youth unemployment were 2.3 percent more likely to be out of work as well, all else being equal. Having a family member in jail was also strongly associated with youth unemployment.

The Massey, Gross, and Eggers (1991) model also was used to estimate the relationship between neighborhood poverty rates

¹¹ A caveat to this conclusion is that the authors may not have succeeded in isolating the causal linkage between neighborhood and individual behavior. That is, their correlation may have been a result of more female heads of household driving up the tract's poverty rate.

and teenage unemployment. They estimated that the probability that black youth did not work would rise from 36 to 48 percent if the neighborhood's poverty rate rose from 9 to 32 percent.

O'Regan (1993) and O'Regan and Quigley (1991) developed a regression model for large metropolitan areas, using census employment data for black and Hispanic youth. They found, controlling for rate of white youth unemployment, industrial structure, employment concentration, commuting times, and metropolitan racial composition, that 1980 black youth unemployment overall and in the central city was significantly correlated with the residential isolation index for the black poor. They attributed this result to limited job information associated with concentrated poverty, but the result is also consistent with a variety of other neighborhood effects.

Enberg and Kim (1993) use the 1980 PUMS data to estimate a model that distinguishes between the effects of individuals' residential choices on the basis of their incomes and local conditions that might affect individual earnings. The sample included males ages 25 to 55 who worked full time for more than half the year and lived in the Pittsburgh metropolitan area. Enberg and Kim found that sorting by income was of negligible explanatory power compared with neighborhood effects when considering spatial earnings variation. But they (as well as other researchers in this field) were unable to identify precisely whether it was peer effects, information networks, signals to employers, or other location-specific features of local labor markets that produced the observed neighborhood effects.

Crime and substance abuse

For neighborhood-related effects on the probability of committing crimes, the Case and Katz (1991) study again provides the strongest statistical evidence. Their statistical work revealed that, all else being equal, a youth in an area where the teenage crime rate was 10 percent higher was 2.3 percent more likely to have committed a crime during the past year. In addition, a youth was 2.7 percent more likely to be friends with gang members, 3.2 percent more likely to use illegal drugs, and 3.4 percent more likely to use alcohol weekly if the neighborhood in which he or she was living had a 10 percent higher incidence of other youth evincing the same behavior.

Empirical evidence on neighborhood effects: Conclusions and caveats

The foregoing summary indicates that much statistical evidence supports the influence of neighborhood social networks and economic conditions on youth's intellectual development, educational attainment, marriage and fertility, labor market participation and earnings, and, to a lesser extent, criminal behavior and drug use. We believe that this evidence is sufficiently convincing that neighborhood effects should be adopted as a working hypothesis.

Nevertheless, we note several limitations of existing work. First, this type of analysis clearly suffers from omitted variables, most often related to extrafamilial ties with other individuals, groups, or organizations. Second, few of the studies disaggregate sufficiently to test whether effects are uniform across gender and racial-ethnic groups. Third, the correspondence between theoretical and empirical measures of the neighborhood environment is imperfect because of the limited data available at various geographic scales. Fourth, the potential for selection bias cannot be ignored; if important but unmeasured characteristics of parents affect both their selection of neighborhood and their children's behaviors, analyses will overstate apparent neighborhood effects. Suggestive evidence in this regard is provided by Evans, Oates, and Schwab (1992), who conducted further research on the dropout effects reputedly generated by peer-group activities. They found that the effects disappear when the peer group is considered an endogenous variable, influenced by household decisions regarding residence and school choice. Their model assumes (as does that of Plotnick and Hoffman 1993) that a full range of these choices is equally available to all people. Of course, the peer group is to some extent self-chosen, but options are severely limited by spatial factors and perceptions of socially normative behavior. Thus, the extent of self-selection bias in generating these neighborhood effects remains speculative.

Geography of metropolitan opportunity: Policy implications and future directions

We have argued that there are objective spatial variations in the operation of markets, institutions, and social systems that constitute vehicles of upward mobility. This spatially variant geography of opportunity has led many youth in our inner cities to make choices about education, fertility, work, crime, and welfare that are socially (and, ultimately, personally) counterproductive.

These choices have been made, we argue, because they make sense from the perspective of these young decision-makers, based on their subjective perceptions of the metropolitan opportunity structure, how it relates to them, and what sort of economic options it offers. Of course, these perceptions of options and prospective payoffs are evaluated in the light of the decision-makers' (subjective) values and aspirations, and the resulting choices are made within the constraints posed by the limited information-processing capabilities of the human organism. But these perceptions are not formed in a social vacuum; on the contrary, both firsthand experience with and secondhand information about the opportunity structure are potent determinants of values and aspirations. Thus, both objective and subjective elements of the decision-making process and the opportunity structure are interrelated in mutually causal fashion.

Because information gathered secondhand by decision-makers is crucial in shaping perceptions of prospective options and outcomes as well as values and aspirations, the way that youth gather information is elevated to a central issue. We have argued that in many inner-city communities the local social network—kin, friends, voluntary associations—plays a central role in transmitting, editing, and evaluating information for youth. Indeed, the evidence reviewed in this article that neighborhood and peer effects can be potent influences on youth's choices supports our claim.

The implications of this model for educational institutions warrant consideration. Quadrel, Fischhoff, and Davis (1993) note that a middle path between allowing adolescents more freedom than they are capable of handling and unnecessarily restricting adolescent freedoms provides a forum for adolescent personal growth. For educational institutions, adhering to this path is especially important. Decision-making skills can be enhanced, perhaps even taught, and the classroom is the ideal place for this activity.

Teachers can enhance decision-making skills by encouraging participation in the classroom environment and by creating an atmosphere that encourages students to engage each other and construct that environment. Classroom structures that rely on the packaging and passing down of unlinked sets of information discourage students from participating in the construction of the learning environment and from interacting with the information. Students' learning of decision making is hindered when they are viewed as vessels to be filled. Smaller classes encourage cooperative learning and reciprocal teaching, a process in which

students participate by leading group discussions; this encourages questioning, clarifying, and summarizing (Gallagher 1994). This model also encourages predicting outcomes from the information at hand, an extremely important aspect of the decision-making process. In this environment, students' decision-making abilities are developed, refined, and reinforced by both teachers and peers. Ultimately, capable and informed decision-makers emerge. Of course, many youth will still confront a limited opportunity set, but under such constraints, making the most reasoned decisions strikes us as especially important.

Our formulation also suggests that the traditional antipoverty policy nostrums of the Left and the Right are too simplistic. The Left has tended to argue that "equal access" afforded by government intervention into the markets and institutions composing the opportunity structure would be sufficient to alter youth's decisions. This view overlooks the personal psychological damage wreaked by prolonged deprivation and, more important, the associated adaptations of local social networks. New opportunities may be generated, but if youth never hear about them, are never encouraged to take advantage of them, and never see their peers taking advantage of them, there will be minimal behavioral response. The Left, therefore, must not underestimate the importance of building and maintaining viable community institutions that can mediate effectively between opportunities and youth.

The Right has tended to focus on the "bad values" of youth who have chosen to drop out, commit crimes, and bear children out of wedlock. This view overlooks the fact that values, aspirations, and time horizons are not created in a socioeconomic vacuum but are a product of local social networks that are themselves a spatially variant component of the metropolitan opportunity structure. Furthermore, values become irrelevant for choices that the decision-maker judges infeasible because they are not perceived as part of the opportunity set.

Our analysis raises many fundamental public policy questions: Should the goal of an equal opportunity policy be only the traditional one—to enforce civil rights laws so that the opportunity functions do not discriminate? Or should policy move more aggressively toward providing equal "spatial opportunity"? If so, in what dimensions of the opportunity structure should citizens be guaranteed equality? (A recent spate of court cases, for example, has held that inequality of fiscal resources for school districts violates the equal protection clause of the Constitution.)

What are the most important (in shaping youth's decisions) objective variations in the opportunity structure that policy should strive to equalize (Lehman and Smeeding 1994)? Which components (if any) must be equalized (or their most disadvantageous features ameliorated) before other components can be effectively dealt with by policy? (For example, if negative role models dominate the local social network, is deconcentration of local youth a necessary condition?) Which are the easiest, most politically feasible approaches? (Such policies as racial and class integration of suburban housing, inner-city redevelopment, and city-suburb reverse commuting mobility might be appropriate.)

What are the public policy responsibilities regarding the subjective variations in values, aspirations, and perceptions of the opportunity structure? To what extent are perceived limits on opportunity an indicator more of erroneous or incomplete information or counterproductive local norms than of an objective lack of opportunity? What public supports for formal and informal information sources might be appropriate? (Policies ranging from expanded information-referral centers for employment and training to male mentoring may be relevant here.)

Our analysis suggests multiple avenues of further research. Given the hypothesized central role of informational media and their influence on values, aspirations, and perceptions, qualitative work involving ethnography, focus groups, and social surveys would be appropriate. Quantitative research that better identifies aspects of the local social network that have large influences on certain decisions of youth is called for. Finally, more attempts are needed to formally model the complex interrelationships among components of the opportunity structure if we are to better comprehend which policy choices are likely to generate the greatest synergy in unraveling the nexus of spatial disadvantage.

We hope that these new explorations occur and, indeed, that the work presented stimulates these activities. Only with such efforts can we rise to Wilson's (1987, 18) challenge to "propose thoughtful explanations of the rise of inner-city social dislocations. Such explanations should emphasize the dynamic interplay between ghetto-specific cultural characteristics and social and economic opportunities."

Authors

George C. Galster is a Principal Research Associate and Sean P. Killen is a Research Associate in the Public Finance and Housing Center at The Urban Institute.

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