

THE IMPORTANCE OF PLACE

Like those of other living things, our structure, development, and behavior arise from a genetic foundation sunk in an environmental context. Yet while we readily accept that a healthy seed can't grow into a plant without the right soil, air, light and water, and that a feral dog won't behave like a pet, we resist recognizing the importance of environment in our own lives.

Winifred Gallagher

Flames leaped 200 feet into the air. A thick pillar of black smoke loomed over Birmingham, Alabama, on October 2, 1997 as a fire, punctuated by a series of explosions, consumed a large downtown warehouse complex. The warehouse, which burned for three days, contained heavy concentrations of hazardous chemicals. A 15-square-block area near the warehouse was evacuated because of the health risks. Hours after the fire started, ash continued to rain down from the sky onto pedestrians. Millions of gallons of water used to douse the fire flooded the sewer system and washed into Village Creek, a stream that periodically floods low-income neighborhoods on the western side of Birmingham, near the downtown.

Uncertainty surrounding the dangers posed by the fire and by pollutants released into the air and water continued for nearly a week after the fire began. Initially, state and county officials denied that hazardous materials had leaked from the warehouse. As early as the day after the

fire's start, however, newspapers reported that nearly 5,000 gallons of a highly concentrated form of Dursban (80 times the over-the-counter concentration) had been released into the water and air. Dursban is an organophosphate pesticide, a low-level nerve agent, known to cause health problems ranging from birth defects, chronic headaches and neuromuscular pain, short-term memory loss, nausea and vomiting, and breathing problems, to a condition known as multiple chemical sensitivity (U.S. Environmental Protection Agency 1997). Concerns over the safety of Dursban raised by the Environmental Protection Agency (EPA) led its manufacturer, Dow Chemical, to voluntarily restrict its marketing and revise instructions for application and use.

In the first few days after the fire began, residents living in the low-income, mainly African American neighborhoods near Village Creek reported smelling noxious fumes and experiencing a variety of physical symptoms including headaches and nausea. Dying fish and other signs of serious environmental problems were noticed in the stream that flows through their neighborhoods. It took almost a week, however, before any official response to residents' complaints. Six days after the fire, "no fishing" signs were posted, the Alabama Department of Environmental Management finally released test results on water and air samples. By then, the seriousness of the contamination was obvious. Village Creek had become a flowing stream of dead, rotting fish. Residents living along the creek complained to EPA lawyers about the slow response of local officials to their concerns. They believed that the spill would have been taken more seriously if the damage had occurred in a better-off neighborhood where residents were White. Indeed, it was only after the polluted waters began to wreak devastation further downstream, near those better-off residential areas, that more serious measures were taken. A temporary filtration dam was built to protect these areas from pollutants, but it failed. In a span of three weeks, almost 30 miles of waterway near residential areas were contaminated and hundreds of thousands of fish killed. The first legal actions were taken only after pollution began to wash ashore near higher-income, mostly White residential areas. Civil suits were filed on behalf of local residents in two of these areas (a residential area near Bay View Lake and one near the Black Warrior River).

These suits raised concerns about damage to the water supply and housing values.

Six months after the fire and the largest Dursban spill in history, contamination levels in some areas remained high, although the waterways showed signs of a slow recovery. While a number of reports of medical problems connected with Dursban poisoning have been received by the County Health Department, little is known about the long-term public health consequences of the spill. Blood samples taken from residents along Village Creek were lost, with few repercussions. Despite media coverage, surprisingly little consideration has been given to the mental or physical health consequences of the event in the Village Creek area. This spill represented a dramatic ecological event, but it was only one instance in a long history of environmental problems. Village Creek is a dumping ground for industrial waste, prone to other environmental problems such as periodic flooding. Residence here is stressful and dangerous.

The natural history of this disaster reflects a larger public health issue in the United States that continues to be pervasive in America's central cities. Persons living in neighborhoods with large concentrations of poor minorities are exposed to serious physical and mental health risks (Andrulis 1997; Charles 2003; Conrad 2009; Corburn 2009; Kawachi and Berkman 2003; Williams and Collins 2001). With limited resources to address these risks, residents have found existing agencies incapable or unwilling to deal with the wide range of problems encountered. Risky environments are not usually the ones where politically effective responses occur or where the greatest public efforts are made to address the problem. Yet, in this ineffective response to serious health needs, the health and well-being of the greater whole is affected. As Dr. Martin Luther King Jr. once reminded us: "Of all the forms of inequality, injustice in health is the most shocking and the most inhumane."

Place Matters

Place is a key element in our identity. Who we are is reflected in the places we occupy and the spaces we control. These places range from nation to region, state, metropolitan area, community, neighborhood,

block, and residential dwelling. Each location has profound social meaning for us, and in a literal sense defines not only who we are, but also how we live and die. Despite the evolution of cyberspace technologies capable of transforming “theres” into “heres,” residence continues to have dramatic consequences for individual health and well-being. The prevalence and incidence of risks for a variety of physical and mental health conditions within metropolitan areas range widely by residential area. Most notably, life and death experiences in the inner city are more similar to those living in the Third World than to the experience of suburbanites living just a few miles away (Geronimus et al. 2001). Perhaps the most notorious examples of this situation are the neighborhoods of Harlem in New York City and Roxbury in Boston. Mortality rates in these places for Black men under 65 are more than double the rates of U.S. Whites and 50 percent higher than the rates for all U.S. Blacks (McCord and Freeman 1990, 2009).

For certain segments of the population, being in the wrong place is not a matter of timing or accident, *but rather a function of the social structure*. The places we live, work, and play are fundamental resources, like time or money. The access we have to these resources dramatically affects our well-being. All human beings live in a spatial world where everything and everybody has its place. Everyday lives are spatially structured. At the heart of this structure is a simple fact—there is distance between ourselves and the other actors and objects in our environment. To satisfy basic needs and interests we must either find ways of getting objects or actors we are interested in to come to us, or find ways of getting to them. Hence, where people live is of great importance.

Place matters in the contemporary world, but for different reasons than in the past. Our ancestors were place-bound by necessity. Indeed, for most of human life on earth we lived as hunters and gatherers, living off the land in small bands so isolated from each other that strangers were met with great suspicion and alarm.

Dramatic technological revolutions eroded this isolation in ever intensifying waves of change—first, an agricultural revolution 10,000 years ago, then an industrial-urban revolution 9,700 years later. During this vast period of time, the spatial horizons of people broadened as

transportation and communication technologies improved, trade expanded, and cities attracted large numbers of culturally heterogeneous populations. We are now in the midst of an information revolution. This third wave of change is technically capable of ending the isolation between people; yet spatial barriers persist in highly segregated cities with distinct inner-city and outer-city areas. Thus, as we progress through a new millennium, space is redefined and reshaped, and for some takes on heightened significance.

The enduring significance of place is truly remarkable, for technologies now exist to move people and resources vast distances in very short times, while information can be transported almost instantaneously to the most remote regions of the world. Distant places have attained a kind of “hereness” that was unimaginable just a century ago. Marshall McLuhan (1965) describes this new world as a “global village,” but this place has a more distant potential for certain segments of the population. Indeed, when surveying the urban geography, with its vast neighborhood differentials in health risks, the more appropriate spatial analogy may be that of an expanding universe of places moving farther away from each other, rather than closer.

There is good news and bad news contained in the reality of evolutionary trends. While technological developments in transportation, communication, and information processing give humans new capacities to break down spatial barriers, a socially structured spatial environment produces new barriers. These structures are the modern-day equivalent of the medieval city’s walls—separating portions of society from one another and preserving vast differences in levels of living and overall well-being. Awareness of the impact of these invisible barriers for the health and well-being of large numbers in our society may make it possible to develop programs to alleviate this spatial penalty. As Melvin Webber has suggested (1964), we have the technological capacity to live in a “non-place urban realm” where the friction of distance is minimized. At present, however, we live in a bifurcated world of possibility and actuality. There is the potential for a non-place urban realm, but at the same time there is the reality of a highly segregated city perpetuating an ecology of disadvantage.

Why an Urban, Place-Based Approach to Health?

There is an ecology of disadvantage in America, and one of its most significant outcomes is the “urban health penalty” (Greenberg 1991). This penalty is important to understand for several reasons. First, we live in an urban society. While a century ago only 25 percent of the population resided in urban areas, now three-fourths live in a metropolitan area consisting of one or more principal cities and a ring of suburbs. Second, experts generally agree that the single most important global environmental influence in this century is the process of urbanization itself (Gallagher 1993). A majority of the world’s population now lives in cities, and in the next three decades nearly three-fourths of the world is likely to be urban (Galea et al. 2005; Mercado et al. 2007). The impact on the ecosystem of such an event is potentially serious, with dramatic increases in pollution, consumption of non-renewable resources and irretrievable losses of millions of known and unknown animal and plant species (Meadows et al. 1972). Third, the city is a distinct social environment that over time has accentuated great inequities between peoples. Within its boundaries dramatic variation exists in material wealth, personal well-being, and overall quality of life. Finally, the city is an artificially constructed environment, an “intentional” or “built” environment, and thus it can be re-engineered to promote more desirable health outcomes. Unlike natural disasters, the disasters befalling some of our inner cities are preventable.

Data on the largest cities in the United States (Andrulis 1997; Benbow 2007) suggest the health costs of urban residence. Among the most striking observations are:

- The murder rate in America’s large cities is more than 2½ times the national average.
- The infant mortality rate in large cities is 25 percent higher than the U.S. average.
- Of the 880 most disadvantaged neighborhoods identified by the Child Welfare League, 99 percent were located in cities.
- Forty percent of urban children live below the poverty level.
- The HIV mortality rate is over 3 times higher in large cities.

- The incidence rate for tuberculosis in large cities is 2¼ times the national average.
- The mortality rates for cancer, heart disease, and diabetes are considerably higher in the nation's large cities.

The health problems of urban residents are most severe in the inner city and some of the city's aging suburbs. Here the circumstances of poverty and minority status are exacerbated by segregation; the spatial concentration of these two characteristics intensifies the disadvantages of low income and minority status. Indeed, the American College of Physicians concludes: "One of the most important characteristics [of the health care challenge] is the interrelationships among health and social and environmental problems. The so-called 'urban health penalty'—the confluence of circumstances such as poor nutrition, poverty and unemployment with deteriorating housing, violence and loss of services—has created a deepening health crisis in the inner city." A medical approach, in other words, can no longer be sufficient to reduce the differentials that exist in American health because health risks are spatially and socially structured. Indeed, there is growing realization within medicine and public health that societal forces shape and create the disease patterns experienced by a society, and that successful health interventions require addressing the social factors that produce them (Cockerham 2007; Link 2008). Place is a critical social factor.

While the concepts of place and environment are essential to understanding physical and mental health outcomes in society, they are broad, multidimensional constructs. Place can be defined as a portion of space regarded as measured off or distinct from other spaces. It can be conceptualized as a position or location in space. The environment can be thought of as the totality of surrounding conditions, as an area in which something exists. Both concepts imply a force, which is more than physical in character. As an environment, a place can be seen as a container whose characteristics derive primarily from what is contained within its recognized boundaries. These contents involve physical, cultural, and social components.

As a point or portion of space, spatial coordinates can define a place,

and hence it has physical qualities. But it is also a space, which is socially, culturally, economically, politically, and psychologically defined. The places occupied by individuals are thus not just physical entities characterized by physical positions in space or by the characteristics of those elements contained within the spaces. They are also mental constructs, psychologically defined by individuals who occupy certain social positions and possess a particular set of cultural values. Each person carries around a set of mental maps that are a product of personal experiences, cultural stereotypes, preferences, and objective information. We live in personal worlds, so that the very same places may be understood and defined very differently by persons with different sociocultural backgrounds and personal experiences. One person's heaven may be another's hell. Understanding the relationship between environment and health thus requires a careful analysis of environments in all their complexity, for place is a multidimensional construct.

Ghetto Poverty Tracts: A Definition

This book deals with the impact of place on health, specifically poor urban neighborhoods and their importance for residents' health. The term *inner city* is used frequently in both the popular and scientific literature on urban areas, yet that concept is deceptive because not all poor urban neighborhoods are centrally located; metropolitan poverty is sometimes concentrated in aging suburbs. Perhaps the closest thing to a formal designation for the spatial concentration of poverty is contained in the work of urban researchers such as Wilson (1996) or Jargowsky and Bane (1991), who use U.S. census data to designate "ghetto poverty census tracts." Ghetto poverty areas are census tracts within Metropolitan Statistical Areas (MSA) where the household incomes of at least 40 percent of residents are below the poverty line. Researchers have noted several significant trends in these ghetto areas over the last four decades: (1) the number of ghetto areas more than doubled during the 1970s and 1980s; (2) the ratio of poor to non-poor in ghetto areas increased dramatically; (3) the African American presence in ghetto tracts grew substantially; (4) while these trends tended to reverse themselves in the

1990s, they began to re-escalate in the first decade of the twenty-first century (Jargowsky 2003; Kneebone and Berube 2008; Wilson 1996). Today, nearly half of metropolitan-area Blacks live in ghetto tracts that increasingly isolate the metropolitan Black poor from Whites and non-poor Blacks.

While there is considerable debate over the issue (Massey and Denton 1993), Wilson (1980, 1987, 1996) believes that the growing concentration of Black poor in ghetto tracts represents a new trend in urban minority poverty. Wilson argues that the recent trends in ghetto poverty tracts are more than just an outgrowth of the processes of racial and class segregation. He believes that as jobs left the central city during the 1970s and 1980s, so did non-poor Blacks, and as jobs and middle-class Blacks left, both the ghetto economy and ghetto community collapsed. He contends that the current concentration of minority poor occurs faster and for different reasons. In the past, ghettos and slums, while products of dramatic racial segregation, were more organizationally stable because they contained a wide range of economic institutions and a sizable population of non-poor who served in positions of leadership in the community.

Though they may have lived on different streets, blacks of all classes in inner-city areas . . . lived in the same community and shopped at the same stores. Their children went to the same schools and played in the same parks. Although there was some class antagonism, their neighborhoods were more stable than the inner-city neighborhoods of today; in short, they featured higher levels of what social scientists call “social organization.”

(Wilson 1996:20)

While Wilson uses the concept *inner city* to describe concentrated urban minority poverty, *ghetto poverty tract* is more technically accurate and so we choose to use the latter term.

Place as Life Chance and Risk

Every place we live in has certain levels of *hazard* and *risk* associated with its various social, cultural, and physical components. A hazard is a

situation that, under particular circumstances, could lead to damage or harm to a human being or a population. It is thus a collection of situations and circumstances. An example might be the situation of a curving, deteriorating road, which, under the circumstances of heavy traffic and light rain, could result in a multicar accident. Or in the case of the Birmingham warehouse fire, the situation was an unprotected stream, Village Creek, which frequently received runoff from the industries located around it. The circumstances which, in combination with this situation, led to the potential for serious environmental damage and human loss were: (1) a warehouse without adequate fire safety features, (2) heavy concentrations of dangerous chemicals stored in that warehouse, and (3) a metropolitan area and state with an ill-prepared emergency response team. Risk is defined as: "the probability of damage or harm in a specified period [and place]" (Royal Society Study Group 1992:3). In essence, risk is the likelihood of a hazard causing harm to an individual or population.

Beck (1995) has argued that risk and hazard are of particular importance in advanced modern societies ("risk societies") where a system of rules has developed to deal with industrially produced risks and insecurities. The calculus of risk, developed in the work of physical scientists, engineers, and public health professionals, has become the "mathematical morality of the technological age." In this form of reckoning, the risk of a decision or activity is calculated as a mathematical probability and is no longer defined as potential harm to individual human beings. That is, risks are borne by a population rather than by individuals. After scientists calculate risks, they are judged to be either more or less acceptable, and strategies are devised to contain risk within some acceptable range.

Once risks are established, a series of protections can theoretically be devised to reduce the probabilities of harm or loss attached to certain decisions and the circumstances that surround them. In an advanced, high technology society such risks can be very high. Some people will be more affected by the growth of these risks than others; that is, what Beck (1995) calls "social risk positions" develop which follow the inequalities of place and class standing. In the "risk society," levels of hazard and risk are differentially distributed in the urban landscape, and the distribution

of risk and hazard in turn differentially affects health outcomes. Each level of residential place from nation to region, state, metropolitan area, community, neighborhood, block, and dwelling can be assessed in terms of health risks and hazards.

Places are environments consisting of physical, cultural, political, economic, and social components, with each component contributing in complex ways to the differential risks experienced by a population. At one level, place can be seen as a means of objectifying the complex set of risks that come together to affect a population's health—in short, a method for reporting health risk data. But it is clearly more than just a unit by which the health of a population can be reported and analyzed. Place is a meaningful unit, not simply because a population uses various places as the stage on which to carry out its behaviors and actions, but because the stage (or place) itself shapes these actions and experiences. We are who we are, and we experience what we do on a daily basis in part because of where we find ourselves. Our physical and mental health is a product of not only how we live, but also where we live.

Environments are *risk spaces*. The most obvious place-based health risks are associated with physical aspects of an environment. These include such things as harmful chemical agents, pollutants, viruses, and bacteria contained in a local space as well as the quality and arrangement of built and natural physical features in a place (architecture, building deterioration, building materials, paint, landscape, etc.) that may present seen and unseen hazards for the occupants. But places also contain psychological and social risks as well. Some areas are decidedly more stressful, with too much noise, too many people, or just an overload of stimuli. Other places expose individuals to strangers where interactions are less secure and predictable, or to situations where hostile, aggressive interactions are possible. In many cases, the risks associated with place are heavily concentrated in just a few areas. Not surprisingly, such areas tend to occur where residents are least equipped to respond to the challenges imposed by place—such as Village Creek in Birmingham, the Roxbury area of Boston, or New York's Harlem.

Place as Social Resource

Just as the areas of a city can be viewed as risk spaces containing differing levels of hazard, cities are *resource spaces* where the goods and services capable of protecting inhabitants from harm are also differentially distributed. That is, cities have a topography both of risk and of protection. This topography, as Beck (1995) notes, tends to follow the shape and structure of the larger society, with the most visible distinctions occurring at the opposite ends of the system of stratification. Each metropolitan area reflects the contours of the society, with risk heavily concentrated in the inner zones of the metropolis where there are significant concentrations of low-income, underemployed minorities. At the same time, protection from risk, in terms of availability of health professionals, community resources, and supportive social networks, tends to be inversely related to risk and risk locations. These are not merely matters of material differences between people but reflect a larger fabric of inequality only partially related to income. This inequality has become more obvious as the geography of inequality has become more apparent in America's cities. Historically, slums were so successfully hidden from the daily activities of middle-class consumers of the city space that they seemed non-existent. Indeed, the term *slum* is believed to derive from the word *slumber*, because slums were composed of "unknown, back streets or alleys, wrongly presumed to be sleeping or quiet" (Partridge 1958). While patterns of residential segregation still permit most metropolitan residents to avoid slums on a daily basis, the geographical spread of the high-poverty ghetto and its multiplicity of problems make such places hard to ignore. They are certainly not sleeping or quiet, and the long-term implications of such concentrated risk for the society as a whole are significant.

Wilson (1996), in his discussion of the inner city, notes a substantial change in the character of the areas where minority poverty concentrates. Lower levels of "social organization" characterize the inner-city neighborhoods of today. He notes several optimal dimensions of neighborhood social organization: (1) the prevalence, strength, and interlocking of social networks; (2) the degree to which neighbors take personal

responsibility for neighborhood problems; (3) the extent of surveillance done by neighbors; and (4) the degree of participation in formal and voluntary organizations tied to the neighborhood and to the larger community. Social organization in this sense is a critical protection against hazard and risk. Areas where there is a concentration of weak social networks, limited feelings of personal responsibility for neighbors, low levels of surveillance, and limited participation in the institutional network of the community are also areas where vulnerability to the risk of environmental *hazard* is concentrated. This susceptibility to risk becomes all the more important in areas with limited economic and political resources and high levels of *hazard* to begin with. The risks themselves are cumulative; that is, the hazardous nature of a given environmental circumstance intensifies under the absence of protection. Strong organizational structures in an area can serve as a form of inoculation against stress and ill health. Neighborhood context can promote a culture of vigilance and responsibility that mitigates against local hazards and risk, while at the same time empowering individuals to take action against the hazards present in local spaces.

Place is a force in the lives and health of a population apart from the individuals and risks associated with that place; it is a real factor in personal well-being. Individual choices and actions take place in spaces which in turn shape and structure those choices and actions. Places are the stages upon which social and cultural forces in the larger society affect individuals. In this sense, the spatial division between high-poverty ghetto areas and the rest of the metropolis is a reflection of the U.S. society's structure itself; the spatial distance between populations reflects their social distance, their position within the larger society (LaGory and Pipkin 1981). The existence of the high-poverty ghetto is geographic testimony to the dramatic socioeconomic divide that persists between certain minority groups (most notably African Americans and Hispanics) and mainstream America. Cities from their very origins were founded on differences, just as the societies, which contained them, involved a system of stratification. In preindustrial cities, these differences were primarily between the urban resident and the peasants. Walls were erected to regulate access to the city's resources and to protect the

system of differences that prevailed in society. The social distance between citizen and peasant was dramatically symbolized and reinforced by the city walls. The contemporary city is heterogeneous, yet real barriers exist between residents.

The contemporary city's walls are not like the physical structures of the preindustrial city, but there are real physical and mentally constructed barriers between the populations that reside there. The barriers are reflected in pervasive patterns of segregation, with those groups at the bottom of the social system most highly segregated from others. As groups assimilate into the larger society they are less likely to be concentrated in certain areas and tend to disperse across the urban landscape. This does not mean, however, that minority groups, which scatter across the metropolis, are any less likely to be segregated. For example, while middle-class African Americans have dispersed spatially, they remain highly segregated from Whites. Indeed the most significant feature of U.S. residential patterns in the last 60 years has been the concentration of Blacks in central cities and Whites in suburbs (Booza et al. 2006; Charles 2003; Massey and Denton 1993). While Black suburbanization has occurred, only a small percentage of Blacks live in suburbs, and most of those live in highly segregated, older suburbs.

Segregation is a powerful spatial force protecting the status quo and separating groups from one another. Highly segregated groups find themselves isolated from the organizational structures and resources necessary to promote health and well-being (Mitchell and LaGory 2002). Thus, segregation ensures that neighborhoods with limited resources for protection against risk will be particularly vulnerable, since their isolation restricts their access to the range of resources available in the larger community. Places with weak social organization that are also highly segregated promote an existence very different from the rest of the society. This type of segregation creates walls as real and impermeable as those in ancient preindustrial cities.

Insularity is likely to promote cultural differences across the urban landscape as well. Places in which outside contact is restricted become fertile ground for the promotion of subcultures and lifestyles associated with high-risk behaviors. There is strong evidence that pursuing a

healthy lifestyle can enhance health and life expectancy (Cockerham 2007). It is also well known that certain lifestyles have negative health consequences. Unprotected sex, promiscuous sexuality, and intravenous drug use increase the risk of contracting AIDS. Smoking is linked to lung cancer and heart disease, alcoholism to cirrhosis of the liver. Participation in gangs increases the exposure to violence and risk of physical injury, while high-fat diets accelerate the risk of heart disease and atherosclerosis. Segregation may be linked to the promotion of unhealthy lifestyles by creating the conditions in which access to mainstream role models is highly constrained and access to deviant institutions and deviant subculture is intensified. In criminology, differential association theory (Sutherland and Cressey 1960; Taylor 1988) suggests that individuals develop deviant lifestyles because of their exposure to certain contexts. Certain lifestyles, in other words, are more likely to be learned because individuals in highly segregated settings experience greater exposure to deviant subcultures and greater isolation from more traditional health lifestyles.

Besides promoting subcultural differences in health lifestyles, segregation can enhance the negative circumstances of already stressful high-poverty environments. Since the mental well-being of individuals undergoing stress is in part a function of their social resources, it stands to reason that the range of these resources will have an impact on health. People living in spatially constrained communities have spatially constrained support systems, and hence may be more likely to experience the negative consequences of stress (Haines and Hurlbert 1992).

The Multidimensional Nature of Place

The neighborhood is an important place for the provision of protection against risk, and much of our discussion focuses on that spatial level. Aspects of protection and risk, however, manifest themselves in a variety of environmental layers. These layers range from the home, to the neighborhood, the community, the metropolitan area, region, nation, and globe. Place is a multidimensional, hierarchical phenomenon. All human action occurs in space, but this space is more than a physical

container; it is a social and cultural phenomenon as well. Barker (1967) portrays places as “behavior settings.” A behavior setting is bounded in space and time and possesses a structure that interrelates physical, social, and cultural properties in a particular way so that certain patterns of behavior are likely to be elicited. Place involves far more than a physical setting. While a place’s character is a function of physical qualities, it is also a product of risks and opportunities, the nature of the social organization attached to the locale, its political, social, and economic relationships with other places, the psychosocial characteristics of the individuals occupying the space, and the local cultural milieu. We learn to act in specific ways in certain places; we don’t genuflect in bars or drink beer or eat popcorn in churches. Hence, our actions in various places are conditioned by a number of factors, all of which may operate on the individual to affect not only their behavior, but also their health. This relationship between place and health has not been adequately explored. Its importance, however, is undeniable. The complexity of this relationship is equally indisputable. Places are more than spaces. They are both real geographic units with physical, social, and cultural properties as well as personally defined places—both aspects of place matter for health.

A Framework for the Book

As our discussion suggests, residential areas are more than a simple reflection of the existing system of inequality. Place, and the process of segregation that creates it, actually plays a role in the health and well-being of its occupants. The purpose of this book is to understand that role. In doing this, we explore the nature of residential space, with our focus on the high-poverty ghetto and the impact it has on individual and social life. At the same time, we review existing social science theories of health and suggest how they might be incorporated into a broader understanding of the ecology of health and its implications for the “urban health penalty.”

The Birmingham case study, introduced at the beginning of this chapter, is not an isolated event. It is evidence of a recurring theme in American public health that reminds us of the power of place. While the

Village Creek Dursban spill received considerable media attention, it is but one episode in a more complicated daily drama reproduced across many American high-poverty neighborhoods. Over the past several decades, poverty has become a distinctly urban problem with growing numbers of very poor minority neighborhoods bearing the burden of the “risk society.” Throughout the book we link specific aspects of this trend with broader themes of place and health contained in the chapters.

Chapters 2 and 3 discuss general issues related to human territory and the organization of residential space. Chapter 2 addresses the question of territorial behavior in humans. In what sense are humans ecological actors? Since all human thought and action takes place in physical and social contexts, how do the socially ordered spaces in which we reside affect human thought and action? Do humans have basic spatial needs?

Chapter 3 introduces the reader to the importance of space for everyday urban life, exploring both micro and macro environments. It begins with a discussion of how various features of the built environment shape our experiences. Winston Churchill observed that once we have built our buildings they begin to shape us. What features of architected spaces affect us, and how does the design of residential space relate to the nature of individuals contained within it? Are there such things as “healthy” and “unhealthy” buildings, and if so, what features distinguish them from one another?

Considering the macro environment, what features of the city differentiate it from other residential areas? We detail these basic dimensions of the urban residential space, which include segregation, density, size, and opportunity. In addition, we show how the social sciences describe the city’s basic structure and form, and the pattern of health resources made available to different subgroups within the city. Finally, this chapter also examines how the urban structure influences choice and action for the average resident.

Chapter 4 provides an overview of the major social science models of health: health beliefs, health lifestyles, risk and protective factors, psychosocial resources, and neighborhood disadvantage. These models represent current understanding of the possible social influences on health. While each model has the potential to provide insight into the role of

context on health outcomes, only the urban disadvantage perspective has explicitly looked at the role of context on health. To detail the consequences of spatial structure for physical and mental health, we explore the following: (1) the relationship between place variables and various aspects of culture, including health beliefs and health lifestyles; (2) the relationship between place and an individual's access to health resources; (3) the impact of place on risky circumstances; (4) a place's influence on social networks and supports, and an individual's access to protection against risk; and (5) the confluence of neighborhood physical and social deterioration and its impact on behavior and important health risk outcomes. In so doing, we develop a synthetic model of the ecology of health. This chapter provides the springboard for developing a place-based understanding of the health disparities that exist among persons living in highly developed urbanized societies.

Chapters 5 and 6 take the synthetic theory developed in the previous chapter and apply it to specific health-related issues for high-poverty ghetto populations. Beginning with Chapter 5, we review an extensive empirical literature that shows the city to be a mosaic of risks and protection. Typically, the risk and protective factors model has been used to explain health-compromising behaviors among adolescents; here we explore its applicability to a variety of other subpopulations. Chapter 5 begins with a discussion of the physical and sociocultural aspects of risk and their consequences for urban residents. In addition, we consider the role of informal networks and formal services in providing a layer of protection, particularly for those residents who lack the full range of resources available to the average citizen. Specific physical and mental health outcomes are inventoried as consequences of the risk-laden circumstances present in the high-poverty ghetto. This inventory of health outcomes is applied to a set of special at-risk populations in the following chapter.

Chapter 6 examines the needs and risks of the socially disadvantaged. It begins with an exploration of the work of Wilkinson (1996) on the role that social inequality plays in the general health and well-being of populations in highly developed societies. Wilkinson shows that the least-healthy developed societies are those with the widest gaps between the

advantaged and disadvantaged, and those with the greatest sociocultural separations between groups. To show how this relationship plays out in the residential areas of American society, we look at two special populations—the homeless and racial and ethnic minorities. The homeless are a particularly important population to consider when studying the ecology of health. They are by definition persons without place. The absence of place, and more particularly control over residential space, has specific physical and mental health consequences. In addition, we look at the so-called underclass from various theoretical perspectives, showing how segregation intensifies their disadvantaged status, and then showing the role that high-poverty ghetto areas play in promoting specific health outcomes related to health beliefs, lifestyles, and risks and protections.

In a later section of Chapter 6, age-related at-risk populations are identified at the two extremes of the life cycle—the young and the old. We first describe characteristics of the young and the old as ecological actors, suggesting the significance these characteristics have for an ecology of health. Both groups find their access to places somewhat constrained by their location in the age stratification system. The discussion of youth focuses on the impact that growing up in the high-poverty ghetto has on development, and the particular physical and mental health challenges associated with residence in such places. We explore the qualities of the individual and the social network necessary for resilience in this challenging environment.

For elders, place is imbued with great meaning, so that social psychological factors such as place memories, perceived risk and fear, neighborhood satisfaction, and mental maps can play an important role in healthy aging. The impact of age segregation on health is a particular focus. Segregation by age in urban areas structures risk and protection and shapes the role these two factors play in the health of place-bound elders.

Chapter 7 concludes by proposing an ecological strategy for health promotion in the high-poverty ghetto. We begin by suggesting that the literature on context-based health effects could leave readers with a misunderstanding of the most appropriate health promotion policy. This literature routinely concludes that while there is a contextual effect on health, individual-level effects, in the form of health beliefs, risk-taking

behaviors, genetic predisposition, and so on, are considerably stronger. Although these conclusions are accurate, they have the potential of misdirecting health policy. The fact that individual-level effects are stronger by no means implies that individual-based strategies are the most effective ways to promote health and deliver services in the urban area. Well-designed place-based approaches to health can serve the dual purpose of promoting healthy places, while also efficiently delivering information and services to high-risk individuals.

We believe that a place-based approach to health is a promising perspective from which to address significant health disparities and plan for the healthy society—a major objective in the federal government’s health goals for the new millennium (U.S. Department of Health and Human Services 2000). Without a comprehensive place-based strategy to address the health needs of the at-risk, underserved, and unprotected in the urban core, America will continue to be a society plagued by the contradiction of great wealth and mediocre health.

In this final chapter, we review two types of strategies for addressing place-based problems—removal strategies and community development strategies. We conclude that comprehensive community-based approaches to health are likely to be most successful, and we urge that they be local efforts based on the federal model of the demonstration research and evaluation programs. These community-oriented strategies should invite significant local participation and target the special risks and hazards facing residents while also seeking to identify those individual characteristics that promote resilience.

2

HUMANS AS SPATIAL ANIMALS

Good fences make good neighbors.

Robert Frost

Human existence is about living in the space we fill. Human existence is about granting and denying the same sort of space to others around us.

Peter Petschauer

Residents along Village Creek are conscious of the threat posed to their health and well-being by living there, yet this dangerous place is home and thus has deep significance for them. Perhaps no single inhabitant of the Village Creek area was better known than the acclaimed African American folk artist Lonnie Holley, whose works have been displayed at the White House, the Smithsonian, and numerous art galleries and museums around the Southeast. The saga of Holley's struggle to keep his residence is a strong reminder of the meaning of place. Holley lived for 18 years with his family on a quarter acre tract along Village Creek, near the Birmingham airport. During that time he created an "art environment," taking found objects, assembling them into works of art, and then integrating them into the landscape. To some observers his land resembled a junkyard more than a home or studio. For Holley the link between art, territory, and family heritage involved a deep expression of personal identity—a view familiar to sociobiologists who see a profound link

between territory and human nature (Eibl-Eibesfeldt 1989; Wilson 1975).

His rights to this heritage were challenged when the Birmingham International Airport Authority decided to expand airport runways on land adjacent to Village Creek. After a long legal battle Holley was forced to move. With the process played out in public, the artist was able to demonstrate place's significance for self-identity. He endured threats from local officials who not only attempted to seize his property but publicly encouraged poachers to take any "salvageable material" they found on his land. All the while, Holley fought back by explaining the value of his property in human and personal terms to anyone who would listen. Holley was eventually forced to relocate, but in the process people in the Birmingham area were reminded of the deep personal significance this place held for him. As compensation for the loss of his land, the Airport Authority paid Holley \$165,000 for property originally assessed at \$14,000.

His new home in a rural area outside of Birmingham is an attractive, eight-bedroom, columned house surrounded by cotton fields. Planes no longer roar overhead as they did at his old place, and his family has more room. By all appearances Holley made out well in his territorial dispute. Yet when asked how he felt about the settlement Holley remarked, "I won't say good, but positive. Things down here are quite different than the way they were. I've got to turn everything around completely in my mind to make it work. It's hard to get adjusted. . . . The other place—I knew the people in the neighborhood. Here I'm like a stranger" (Rochell 1998:M8).

The Meaning of Place

Holley's story is one of many that can be told reflecting the deeply ingrained attachment people have with place. Place is more than the stage on which social actions and experiences are played out; it is more than mere geography. For human beings the significance of space and place runs deep. Indeed, the link between individuals and the places they occupy is deeply tied to human biology and culture. Understanding the

biological and cultural heritage that binds us to place is essential to fully appreciate the connection between environment and health.

Humans, like other animals, exist in bounded spatial arenas that affect and are affected by the behavior that takes place within them. The pages of human history are replete with bloody, periodic clashes over territory. These international and national disputes, from Africa to the Middle East, from Northern Ireland to portions of the former Soviet Union, serve as constant reminders of the importance of place in everyday life. Closer to home, in many American cities, groups of youth emblazon their territory with gang symbols and graffiti and wear their colors to signify dominance over an area of the community. During the past decade, gang-related crime has plagued high-poverty neighborhoods and schools in the United States. According to recent estimates there are more than 20,000 criminally active gangs, with a million members, committing as much as 80 percent of the crime in many communities (National Alliance of Gang Investigators Associations 2009).

The striking similarity between these territorial behaviors and behaviors across many vertebrate species has led some observers to claim that humans share an instinctive urge to claim and defend territory (Ardrey 1966; Wilson 1975). Others take exception to this idea and suggest that human territorial behavior is much more complicated and not comparable to the rest of the vertebrate world (Klopfer 1969). Whatever the answer to the question of the nature of human territorial behavior, it is undeniable that place has an important role in our everyday actions, choices, and thoughts. Space is a critical sociological and psychological force and as such affects the quality of our lives. In this chapter we examine the nature of the territory–behavior relationship in human actors.

Territorial Behavior in Animals

Typically the term *territoriality* is used to refer to spatial behaviors directed at the active defense of a territory. In ethology, territorial behavior is thus more than the habitual use of a defined area; it is “behavior characterized by recognition of, use of, and some kind of defensive reaction toward a specific area” (Buettner-Janusch 1973:553). Definitions of

territory also include this link to defensive actions. E. O. Wilson, for example, defines territory as “an area occupied more or less exclusively by an animal or group of animals by means of repulsion through overt defense or advertisement” (Wilson 1975:256). Robert Ardrey describes it as an area that an animal or group of animals defends as an exclusive property primarily against members of their own species (1966).

When dealing with humans, however, the term reflects a more complex relationship between space and behavior. Here territorial behavior is defined as “habitual use of particular spatial locations” and no specific reference is made to defensive behaviors (Sundstrom and Altman 1974). Taylor (1988) uses the term *territorial functioning* to refer to human territorial behavior. Territorial functioning is “an interlocked system of sentiments, cognitions and behaviors that are highly place specific, socially and culturally determined and maintained, and that represent a class of person-place transactions concerned with issues of setting management, maintenance legibility and expressiveness” (p. 6). He is very clear to note that territorial functioning is highly variable across different communities, although it is also essential to a community’s long-term health.

Another type of spatial behavior closely linked to territoriality is *individual distance*—a critical area that surrounds the individual animal like a bubble. Unlike territory, this space is not anchored in place, but moves with the individual. In humans, this distance varies culturally and from one social situation to the next. Hall (1966) argues that there are four individual distance zones in American culture—intimate, personal, social, and public. Intimate social relations take place in a range from actual physical contact to about 18 inches. The behaviors occurring in this zone vary from lovemaking or physical aggression to conversations in which touching is permitted. Personal distance extends from 18 inches to four feet. It is the arena within which personal or so-called primary group relationships occur. It is the normal space for conversation at informal gatherings. Often times the closeness of the tie is reflected by the distance between the interactants. Social distance is the zone in which secondary or more businesslike relationships take place. According to Hall, this varies from 4 to 12 feet. The more impersonal the relationship, the greater the distance between parties. Highly formal ties occur in public

distance, where one or more speakers are separated from an audience by large distances. These distances are likely to promote one-way communication.

While humans display territorial behavior, there is no convincing evidence that these behaviors are innate. Humans are cultural animals; culture conditions the human experience of place. As such, it is not likely that a species-specific pattern of behavior linked to territory can be identified; rather, it is more probable that each culture displays different responses to the same behavioral stimuli. While territoriality is a “phylogenetically acquired trait,” it manifests itself “in diverse cultural forms dependent upon specific ecological and historical conditions” (Eibl-Eibesfeldt 1989). Thus, it is both genetically and culturally transmitted. The significance of this fact for territorial diversity and the environment-behavior relationship is explored in the rest of this chapter.

Territorial Diversity in Humans

To say that humans are cultural is to assume that our response to spatial stimuli differs from that of other animals. Human relationships with the environment are mediated by symbols and, above all, by language. All of our experiences are interpreted with a socially learned symbol system, and all of our interactions involve symbolic exchange. As W. I. Thomas notes, “If men define situations as real they are real in their consequences” (Volkart 1951:81). That is to say, it is the meanings we attribute to the situation that affect our responses to it, rather than the objective circumstances of the situation itself. The effect of the learned symbol system (culture) on our spatial behavior is threefold: (1) it affects what we experience; (2) it assigns values and preferences to the things we experience; and (3) it creates greater variability in territorial behaviors.

Regarding the effect of culture on experience, we tend to perceive only those aspects of place that we are culturally conditioned to see. Culture acts as a filter, letting through only selected elements of the more complex environment. Language, for example, codes experience into unique meaning categories. The Sapir-Whorf hypothesis suggests that language essentially determines reality for us (Newman 1997). This can affect our

understanding of space. The Zulu of South Africa, for example, have no words for squares or rectangles. Their doors, windows, houses and villages are round (Ittelson et al. 1974). Research suggests that they also lack the linear perspective and sense of perpendicularity which others acquire from early childhood (LaGory and Pipkin 1981). Seeing is essentially learned. Colin Turnbull's (1961) account of the "forest people," a group of African Pygmies, provides another example of this. Turnbull took a group of Pygmies out of the forest they occupied to visit a nearby plain for the first time. When they arrived on the plain, herds of buffalo were grazing far in the distance. One of the Pygmies asked Turnbull, "What insects are these?" and refused to believe that they were buffalo. Pygmy culture provided no understanding of perspective.

Besides shaping our experiences, culture also influences our evaluation of these experiences by assigning relative values to spatial encounters. For example, individual distance is highly variable from one culture to another. What might be seen as an invasion of an individual's personal space in one culture could be the distance of everyday interaction in another. Edward Hall (1966) notes the potential for conflict when persons of different cultures occupy the same social space:

As I waited in the deserted lobby, a stranger walked up to me where I was sitting and stood close enough so that I could not only easily touch him, but I could hear him breathing. . . . If the lobby had been crowded with people I would have understood his behavior, but in an empty lobby his presence made me exceedingly uncomfortable.

(p. 151)

How people feel about their spatial arrangements and the places they occupy matters greatly for their spatial behavior. As Taylor (1988) notes, "How people feel about a location is often reflected in how they act there" (p. 81).

Culture's impact on the experience and evaluation of place suggests that territorial functioning will be highly variable. This is particularly evident in density patterns and concepts of territory. Density patterns in societies tend to be linearly related to the level of cultural development.

The more advanced and extensive a society's technology, the better it can absorb large concentrations of population and the more densely populated its communities.

Territorial constructs and defense also vary culturally. In hunting and gathering societies, territory was communally owned. In these societies, war was seldom waged for territorial gain, and the warfare that resulted from territorial disputes was highly ritualized. It was more aggressive display than overt aggression. A concept of individually owned private property began to emerge only as food surpluses developed in agricultural societies. As this occurred, more technologically sophisticated and highly organized warfare was used to expand and defend territory. About 5,000 years after the emergence of agriculture, the state developed as a new territorial unit. Through the Middle Ages and Renaissance the state was generally localized, and conflict was organized according to dynastic and feudal alliances in which the concept of nation was absent. In the modern period, on the other hand, territorial defense is generally organized around the nation state.

This level of variability attests to the significance of culture and social structure for territorial functioning. While we are territorial by nature, the way we function within a given place and how we define that place are highly variable. Culture gives human populations some flexibility in dealing with the environment that allows some populations to significantly modify the predisposition to fixed territory (Casimir and Rao 1992).

Territorial behavior varies from one culture to the next, but this variation signifies our adaptive capacity rather than our tendency to be cultural robots subjected to culturally programmed behavior. By nature we are adaptive creatures. We can and often do adapt to dysfunctional environments. But such adjustments can be at great cost to our health and well-being. Our adaptive ability often allows us to dismiss deplorable, yet changeable environments. Since we can endure even pathological contexts, we often underestimate the significance of environment for our general well-being. There are clearly healthy and unhealthy neighborhoods and buildings. While humans who live in such settings may define them as home and may even feel comfortable there, in order to arrive at

this level of comfort they have to expend great energy and develop cultural, social, and psychological adaptations that may have decidedly negative consequences for their well-being.

It requires energy to move to a new level of adaptation and it requires energy to stay there. Environmental factors that do not conform to some model value . . . are expensive to live with, we pay for tuning them out by using more energy or by being less effective in our work and play.

(Wheeler 1967:4)

People who live in such settings do so at a cost to their health. If they adapt by using more energy and effort to protect their spaces, they are likely to experience health-threatening stresses. On the other hand, if they adjust to the pathologies of a place by becoming indifferent to their neighborhood they contribute to its disorganization.

Healthy environments are congruent with the basic goals and needs of the culture, the group, and the individual. In this sense, the setting places certain constraints on the choices and actions of people in a given social and cultural context. It makes some actions and choices more possible than others, and it makes some expectations and preferences more plausible. At the same time, the relationship between environment and behavior is indirect, with social and cultural forces mediating it. Culture and social structure are more important in determining behaviors and experiences than is the immediate environment. Nonetheless place does play a significant role in our behaviors and experiences; it does more than merely reflect structure and culture.

The Nature of the Environment–Behavior Relationship

Place and behavior are interwoven in a complex fashion. As we have just seen, human spatial functioning cannot be captured by purely biological models portraying territorial behavior as instinctual or genetically structured. Place is an interpreted setting. It is far more than a collection of physical stimuli, and as such, the territorial behavior which occurs there

is also more than a programmed response. How people feel about a place often affects how they act there. People with strong feelings about a given setting are likely to be more protective of it. Human territorial functioning thus involves person–place transactions (Taylor 1988) that are mediated by cultural expectations, as well as social interactions and ties, which take place within an area. Hence, territorial experience and the level of territorial functioning depend on the fit between the individual and the environment.

Michelson (1976) argues that this fit occurs at two levels—*mental congruence* and *experiential congruence*. If places satisfy mental congruence they accommodate the person's values, lifestyle, and expectations. That is, persons who experience mental congruence believe that a particular place or type of place accommodates their needs. For example, in the United States, there is a general belief that suburbs are better suited for raising a family than central cities, hence persons raising families are likely to feel congruence with a suburban setting. At the same time, because places are the stages for behavior (*behavior settings*), experience to a certain extent is constrained by the physical aspects of the place, the cultural expectations about appropriate behavior within the place, and the social experiences possible there. Physical qualities of place make some behaviors and choices more possible than others, and some preferences and expectations more plausible than others. The implication of this congruence approach to territorial behavior is that if the environment is incongruent with the expectations and behaviors of the individual, it manifests itself as an environmental stressor. It also makes it likely that people will not function territorially in such a place. Incongruence diminishes the adaptive functions of territory as well as the personal significance of the territory for identity. Incongruent places do not feel like home.

In addition to Michelson's (1976) notion of the importance of congruence between place and the person's ideals and needs, Stokols (1972) points to the importance of *environmental controllability* for person–environment fit. Certain settings make high demands on the individual, limiting his or her control over the environment. Places with such limited controllability can thwart or block place-related needs and expectations.

When these needs and expectations are thwarted, the individual's health and well-being are likely to be affected.

Geographers capture the complicated nature of the human spatial experience in their distinction between space and place. Up to this point, while we have used those two words almost interchangeably, in geography each has a distinct meaning. Space typically refers to the measurable, objective aspects of geography. It is a material phenomenon, a commodity characterized by what it contains; a set of objects and locations at certain distances from one another. It has formal properties that can be described and measured in a variety of ways including economic, cartographic, geophysical, and demographic. As a wide range of theorists from Lefebvre (1974) to Relph (1976), Tuan (1977), and Logan and Molotch (1987) have noted, however, this concept does not capture the full complexity of the geographic experience. Space as a material commodity is an incomplete, even deceptive conception of the lived space. Indeed, territory can play a more active role, structuring people's perceptions, interactions, and sense of well-being (Zukin 1991). The word *place* is used by contemporary geographers to capture this aspect of the human territorial experience.

Sense of place involves an interactive relationship between the daily experience of local spaces and a perception of one's place in the world. It is simultaneously a center of lived meaning and social position. Place is more than the sum of its parts (Eyles 1985); it is qualitatively different from space and landscape. Relph (1985) attempts to distinguish *space* from the broader, more phenomenological term *place* as follows:

[Spaces are] part of any immediate encounter with the world, and so long as I can see I cannot help but see them no matter what my purpose. This is not so with places, for they are constructed in our memories and affections through repeated encounters and complex associations.

(p. 26)

He further elaborates the distinction by locating place at the very essence of human identity and existence.

To have roots in a place is to have a secure point from which to look out on the world, a firm grasp of one's position in the order of things, and a significant spiritual and psychological attachment to somewhere in particular.

(p. 38)

Places are locations of felt value. Attachment to place is a basic human need, integral to self-identity and self-definition. For human beings, places are much more than territories that supply physical needs; they are imbued with deep personal and cultural meaning; they are holistic and multilevel. The distinction between place and space is much like the notion in urban sociology of the difference between exchange value and use value. Individual attachments to place are often intense and signify such basic issues of identity and meaning that persons often resort to extra-market mechanisms to fight for their right to place (Logan and Molotch 1987). The measurable aspects of the space often cannot predict the intensity of response. Such is the nature of human territorial relations.

Basic Spatial Needs in Humans

Despite the complexity of our spatial relationships, and the inability to capture this complexity in purely physical terms, we can talk about specific aspects of space that are essential to human existence. Thus, we believe there are basic human spatial needs, whose fulfillment gives us a sense of place or rootedness in the world. By need we mean an objective universal requirement to avoid a state of illness (Casimir and Rao 1992). The most basic human needs are for a stable supply of food, water, and shelter. But are there spatial needs that go beyond these? While culture conditions our spatial expectations and territorial behaviors, creating cultural variation, modernization and globalization have permeated world cultures. Hence, spatial expectations may be less and less diverse over time, making these needs more universal. Writings in environmental psychology support this idea (LaGory and Pipkin 1981) and suggest that for contemporary cultures basic requirements may include the need

for privacy, the related requirement of personal space, the need for easy access to social interaction, and the need for safe and defensible spaces. Together these four may supply the sense of place and rootedness that Relph (1985) described as essential to human identity.

Privacy

Privacy constitutes a critical aspect of environmental control in modern cultures supporting norms of individuality and freedom. Sundstrom (1986) describes it as the “ability to control access to one’s self or group.” It provides a sense of self and an opportunity for self-development (Eibl-Eibesfeldt 1989; Petschauer 1997). By withdrawing from social settings, individuals have the opportunity for reflection, integration, and assimilation of information derived from earlier interactions. This information is used to prepare the self for future behaviors. Private places are the spaces in which people get ready for the presentation of self in “front stage” performances (Goffman 1959).

Besides self-development, privacy provides freedom and opportunities for intimacy (Westin 1967). It permits the individual to choose avoidance or engagement in group experiences, giving them the ability to elude public scrutiny and control. As such, it allows the person a sense of autonomy. Privacy also offers opportunities to maintain or attain intense personal relationships between primary group members, limiting and protecting communication, and enabling individuals to share confidential information with persons they trust. It provides a means of temporarily cutting off communication with outsiders, so that total attention can be devoted to a single relationship.

Simple societies did not provide much privacy or autonomy to the individual. In these societies, which Durkheim ([1893] 1933) referred to as mechanical solidarities, the collective conscience (the shared values, beliefs, and sentiments of the culture) almost completely blanketed individual ways of thinking and evaluating. It was only as societies evolved, becoming organizationally and economically more complex (*organic solidarity*), that the collective conscience weakened and independence and individuality were encouraged. As the individual shifted from being

a social object to be controlled to a social unit whose rights were protected, privacy became a critical spatial construct. In the modern world, privacy becomes a basic human need; its absence in the places where individuals live and work produces stress.

Personal Space

In addition to privacy, there also are minimum distance requirements necessary for the healthy functioning of the individual and the group. Eibl-Eibesfeldt (1989) suggests that all human interactions have distance expectations whose trespass is experienced negatively. Edward Hall's (1966) work in proxemics shows, however, that optimal behavior densities vary from one social situation and subculture to the next. That is not to say that crowding has an insignificant effect on social behavior, but that its relationship to behavior and health is complex. High densities are not a sufficient condition for crowding. Crowding is not a physical phenomenon but a cognitive state, wrought by the interaction between physical circumstances, cultural expectations, and the social actors coinciding in a particular space (Hinde 1987).

Most social scientists have, in the past, viewed high densities as unnatural, conflicting with the basic biological needs of the species (Freedman 1975). Simmel ([1905] 1964) was perhaps the first sociologist to address the issue of density. He argued that density produced excessive "nervous stimulation." More than 90 years of accumulated evidence suggests, however, that density has no simple association with pathology (Freedman 1975; Frumkin 2003; Regoeczi 2003). For example, at the neighborhood level, once socioeconomic status of residents is controlled, the relationship between neighborhood density and various forms of social pathology often disappears. Choldin and associates (Choldin and Roncek 1976; Choldin 1978) found that neighborhood density had no independent effect on pathology apart from the effects of slum life, poverty, and discrimination. That is, densely populated poor neighborhoods had higher rates of illness, distress, and crime, but densely populated better-off neighborhoods did not.

On the other hand, at the household level, the impact of density on everyday life is more straightforward. High density in the home “increases opportunities for disagreement, aggression, frustration, and general dissatisfaction among household members” (Baldassare 1981; Gove et al. 1979; Regoeczi 2008). High household density appears to be a stressor for individuals with limited control over the domestic setting. Baldassare (1981) finds that household crowding is particularly stressful to mothers, to parents living in a household where they are not the head or married to the head, and to parents of young children or adolescents. The chronic stress produced by overcrowding in the home has its greatest impact on parent–child relationships. Booth and Edwards (1976) note that in an American sample, high densities apparently increased parents’ use of physical punishment. In a sample of residents of Hong Kong, one of the most crowded cities in the world, Mitchell (1971) finds that while residents in crowded housing were more likely to be unhappy and worried (general indicators of strain), they showed no specific indications of stress (such as mental illness, depression, psychosomatic symptoms). The high densities were related only to children’s behavior. High densities forced children into the street and away from the surveillance of their parents, creating a potentially unhealthy environment for socialization. While no American studies have found such effects, it is certainly plausible that in overcrowded, unpleasant physical circumstances lower-income urban children spend more time outside in the streets—and hence less time under surveillance.

One way in which people can adjust to household crowding is by relying on an agreed social order to reduce the stressful effects of this negative circumstance. Research findings suggest that while this adjustment benefits some, it creates disadvantages for less powerful members of the family. Age stratification is a basic form of social order in all societies. Apparently in high-density settings this stratification is exaggerated to maintain order. People less able to control the environment, most often children and youth, experience the greatest costs of this adaptation process.

Freedman (1975) describes this phenomenon in terms of a *density-intensity hypothesis*. Crowded conditions exaggerate traditional role

relationships, particularly gender roles. Using various role-playing situations in a controlled laboratory setting, he finds that gender roles are intensified in high-density settings. In a competitive setting, when crowding is high, women tend to become less competitive, while men become more so. Similarly, in a simulated jury deliberation, women give less severe sentences in the crowded jury room, while men give more severe ones. With crowding, men become more “manly” and women more “feminine.” This intensification of roles can work to the disadvantage of those with limited power in the household such as children and their stay-at-home mothers (Baldassare 1981; Booth and Edwards 1976; Edwards 1994; Mitchell 1971).

In addition to the importance of social control for determining individual crowding experiences, persons with reduced physical or cognitive competence are apparently less capable of responding to the stressors present in a crowded setting. Physical or mental health conditions, or limited social or psychological resources, may reduce an individual's capacity to adapt to challenging circumstances (Hinde 1987; Lawton 1980). Such persons are *environmentally docile* (Lawton 1980), and more likely to experience pathology from a highly demanding environment such as a condition of crowding (LaGory and Fitzpatrick 1992). The docility hypothesis suggests that in areas where crowding is high, the health penalty will be particularly great for those already experiencing physical and mental health problems.

The impact of the madding crowd is highly variable. For many, density has few if any pathological consequences, yet high densities do take their toll on some segments of the population. Most notably, these tend to be the most vulnerable segments of a community or household. Those with fewer resources (limited power, or reduced physical or cognitive ability) find themselves most vulnerable to the stresses involved in an environment.

Access to Social Interaction

While too much social contact, in the form of high densities, can be dysfunctional, too little contact can be particularly harmful. Humans are

naturally social, requiring contact with others (Eibl-Eibesfeldt 1989). The linkages between the individual and the group have long been seen as essential to the health of both the person and the social system (Kawachi 2001; Putnam 2000). Ever since Durkheim ([1893] 1933), the extent of social ties has been conceived as a critical barometer of social and moral integration, which in turn directly affects personal well-being.

More than 20 years of research demonstrates the critical role of affiliation in health and general well-being (Kawachi and Berkman 2001; Link and Phelan 1995; Thoits 1995). Persons with substantial social networks have better physical health (Berkman and Breslow 1983) and lower mortality rates (Umberson 1987). In addition, social ties promote and encourage good health practices by providing health assistance in various forms as well as providing the individual with caring others who monitor one another's health and health practices (Kawachi et al. 2008; Tausig 1986a; Umberson 1987). As expected, social ties can be significant in times of physical crisis, and indeed most health care, particularly for the chronically ill, is provided informally (Brody 1985).

Social support also plays an important role in allaying depressed mood (Kawachi and Berkman 2001; Lin et al. 1986). Mood, in turn, is related to self-reported health symptoms (Hagglund et al. 1988); anxiety and depression seem to sensitize the individual to physical symptoms such as pain. Social support generally is linked to the well-being of the individual (Lin 2001). It provides not only instrumental assistance to individuals in times of need, but also a sense of being loved and cared for. Even under the direst of environmental conditions, social ties are critical sources of well-being. For example, among the homeless, affiliation reduces depression and increases personal satisfaction (Irwin et al. 2008).

One's level of social affiliation is a function of degree of access to sources of interaction. Spatial arrangements are important factors in access. Some spatial arrangements bring people together for interaction (sociopetal spaces) while others separate people (sociofugal) (LaGory and Pipkin 1981). These qualities are products of social and physical characteristics attached to a given space. There is variation between cultures in just what constitutes an appropriate space for interaction with

acquaintances. For example, in America, front areas often draw people into interaction with one another. In the suburbs, front lawns receive much attention from homeowners, and thus often serve as an arena for neighborly interaction (Whyte 1956). In older urban neighborhoods, low-rise tenements with fronts and stoops closer to the street promote a great deal of neighboring (Jacobs 1961). These behavior patterns encourage friendly conversations and friendship formation along and across the street, whereas back regions are more often used as private living areas.

Besides social definitions of appropriate interaction spaces, access to social affiliation is a function of physical proximity and physical features of the spaces themselves (Porteous 1977; Whyte 1990). Festinger and associates' classic study (1950) demonstrated the impact of proximity on social networks and patterns of interaction. They asked students in 17 low-rise dormitories to identify their friends and to say whom they saw more often socially. The study concluded that: (1) friends were more likely to live in close proximity to one another; (2) friendship choices that included people from different floors were more likely between people closest to stairways; and (3) people at the bottom and top of the stairs were more likely to choose each other as friends than they were to choose people from their respective floors. Thus, features of building design as well as actual physical proximity are important aspects of friendship formation. Cooper's (1975) study of a low-income housing project further supports the role of design and proximity in promoting social affiliations. Because homes were not individually owned, neighbor contacts tended to be enhanced by the placement of shared spaces. Casual neighboring was fostered where common spaces were traversed on the way to parking lots, play areas, laundry facilities, and so forth. In addition to promoting ties, Taylor (1988) notes that physical aspects of the neighborhood, such as vacant buildings or heavy pedestrian or vehicular traffic, can disrupt neighborhood interaction and discourage public socializing.

Just as with the designed environment, access can influence affiliation in the larger metropolitan space. In places where population densities are high, there is a wider choice of friends and acquaintances, leading to a high probability that residents will have and maintain social affiliations in the immediate area (LaGory 1993). Access is, of course, not enough to

ensure affiliation. While people's chances of meeting are a function of access and design features, contact is not a sufficient condition for maintaining social ties. According to Blau and Schwartz (1984) and Gans (1967), friendships are a function of neighborhood homogeneity and the ability of the person to move about freely. Proximity brings people together, but social similarity and commonly shared interests also keep them together (Blau 1977; LaGory 1993). In this sense, perceived social distance is more important than physical distance in promoting the formation of social bonds.

Further research has qualified this finding, suggesting the complicated nature of the relationship between distance and friendship. Athanasiou and Yoshioka (1973) note that physical distance is a critical factor promoting friendships, and that some forms of social similarity are more salient in promoting proximal relationships. For example, at a given distance, people of similar ages are more likely to associate with each other than are people of similar classes. Class, however, becomes significant when race enters into the equation. While race, like age and class, is a salient social identifier, interracial friendship formation, under conditions of high proximity, is probable when socioeconomic statuses are equal (Blau and Schwartz 1984; Deutsch and Collins 1951). That is, the racial barrier to association breaks down when people of similar socioeconomic statuses live close to one another.

Safe and Defensible Spaces

Maslow (1954) argues that the need for security is very basic, ranking just below physiological needs such as hunger and thirst. Security is perhaps most critical in the individual's home, where people expect to relax and let down their defenses (Goffman 1959; Newman 1973a; Taylor 1988). Since basic needs must be filled first, it is crucial that individuals feel a modicum of safety and security in their environments if they hope to satisfy higher-order needs such as affiliation (love, group membership), esteem (personal satisfaction), actualization (achievement), and learning. Without such security, people are likely to become socially isolated and lose contact with the groups and institutions capable of satisfying higher goals.

Unquestionably, poor neighborhoods are inherently less secure places, just as they are also places where basic needs are less likely to be met. In particular, many inner-city neighborhoods are less safe and secure than other residential places in the metropolitan area, with more street traffic, higher crime rates, more exposure to pollutants, more violence, more problems with high vacancy rates and aging buildings (Palen 1997). Under such conditions, Maslow's theory (1954) suggests that insecure residential environments impede the fulfillment of essential human needs such as affiliation, esteem, actualization, and cognitive development. Thus, it is possible that a destructive subculture of poverty will flourish in such places. Wilson (1996) is a strong proponent of this position:

[The] sharp rise in violent crime among younger males has accompanied the widespread outbreak of addiction to crack-cocaine. The association is particularly strong in inner city ghetto neighborhoods plagued by joblessness and weak social organization. . . . Violent persons in the crack-cocaine marketplace have a powerful impact on the social organization of a neighborhood. Neighborhoods plagued by high levels of joblessness, insufficient economic opportunities and high residential mobility are unable to control the volatile drug market and the violent crimes related to it. As informal controls weaken, the social processes that regulate behavior change. As a result, the behavior and norms in the drug market are more likely to influence the action of others in the neighborhood, even those who are not involved in drug activity.

(p. 21)

In his view, unlike earlier American slums described by Suttles (1968), contemporary inner-city neighborhoods are disorganized. They are disorganized because of the high risk of violence and the lack of economic opportunity that characterize new inner-city poverty neighborhoods. This disorganization is likely to further exacerbate the already weakened ability of such areas (with limited resources and limited political influence) to respond effectively to health crises such as the Village Creek

chemical spill. Disorganized neighborhoods' cries for help are often heard as angry cacophony, rather than messages of substance meriting a serious response. Is such disorganization a result of spatial circumstances—a lack of safe and secure spaces? While this cannot be argued with certainty, unmet place needs may lead to greater difficulty in addressing environmental challenges. That is, places which concentrate high risk and limited capacity to respond to risk are more likely to require design features promoting security and defensibility.

Ironically, researchers suggest that certain physical features characteristic of inner-city neighborhoods actually reduce defensibility rather than promote it (Cohen and Felson 1979; Newman 1973a and b; Taylor 1988; Yancey 1971). These design features include high vacancies; spaces that can't be monitored; high-rise, anonymous residential structures; absence of manageable territories promoting territorial identity (such as front or back yards, gardens, or courtyards); proximity to dangerous sites; high vehicular traffic; and unattractive architecture that symbolically stigmatizes residents (Sampson et al. 2002; Taylor 1988).

This lack of defensibility discourages territorial functioning. Territorial functioning promotes healthier social environments.

Small groupings of residents on street blocks, or at the sub block level, generate social forces that result in the establishment of norms. Adherence to, or deviation from these norms, as evident in territorial behavior and marking, allows group members to gauge one another's commitment to locale and potential helpfulness in times of need. They also express group solidarity. Thus . . . territorial functioning emerges from and shapes social dynamics.

(Taylor 1988:197)

Places with higher levels of territorial functioning have higher neighborhood participation and stronger grassroots community organizations. Local areas with improved territorial functioning experience empowerment and improvement in health. The absence of territorial functioning, however, may actually promote a sense of rootlessness,

adding to the hopelessness and lack of empowerment already present in certain areas.

Conclusion

Evidence presented in this chapter suggests that while humans display rich variety in their territorial responses, they have certain culturally and socially conditioned place-related needs and expectations. When these needs and expectations are thwarted, health and well-being is affected, since by nature and culture these needs are deeply rooted in the meaning systems and physiology of the individual.

Such place requirements are most critical, yet most likely to be challenged, in special populations with limited resources and extraordinary needs. These populations are characterized as environmentally docile—less capable of coping with challenging ecological circumstances. Thus poor African Americans living along Village Creek, with limited access to health care services and weak ties to City Hall, find themselves particularly vulnerable to an environmental catastrophe like the October 1997 Birmingham Dursban spill. The very territory that is theoretically supposed to order their world becomes a source of dramatic physical and psychological stress. Attempts to defend it from assault fail, and thus place, instead of being a home, becomes an indefensible territory where risk concentrates alongside limited and ineffective resources. Under such circumstances, residential identity and territorial functioning are threatened, further intensifying ecological vulnerability.

Perhaps the worst-case scenario of the ecologically vulnerable is that of the homeless—a spatially dispossessed class in a variety of political and economic systems. What does it mean for humans to be placeless like the homeless are? A gathering body of evidence suggests grave consequences for the health and mental well-being of this group, with levels of criminal victimization, infectious disease, depression, and chronic health conditions many times higher than those of other low-income groups. We review the plight of the placeless as well as other ecologically vulnerable populations in Chapter 6.

3

THE ECOLOGY OF EVERYDAY URBAN LIFE

We shape our buildings and afterwards our buildings shape us.

Winston Churchill

Tell me the landscape in which you live, and I will tell you who you are.

Ortega y Gasset

The emergence of cities 5,000 years ago marked a revolutionary event in our relationship to place, providing convincing evidence of our ability to control and restructure the physical environment. Since their beginnings, cities have been magnets drawing people to promising opportunities, containers of great cultural and material wealth, centers of innovation, and seats of religious influence. Cities are, however, rife with internal contradictions. In addition to being the source of immense accomplishment, they have been sites of the greatest extremes in living conditions, from luxurious palaces to squalid barrios and ghettos, from secure gated communities to crime-riddled slums. While they generated great economic growth and wealth, they also concentrated hazard in the form of pollution, noise, traffic, and infectious agents. These human-created places have been associated with terms like “placelessness,” “alienation,” and “homelessness.” Apparently, the same city air that makes some free from the tyranny of small-town scrutiny and limited opportunity is a nearly impenetrable prison for others.

Place matters greatly in the modern city. Residents along Village Creek know too well the contradictions of the urban landscape. They experienced most intensely the hazards presented by the Dursban spill, yet were not able to evoke concern from those who could help. This story dramatically captures the reality of the urban space—concentrated hazard for those least able to bear its risks and diminished ability to respond to these hazards effectively because of limited assets. Ironically, those places with more diluted concentrations of the harmful chemical, the areas furthest downstream from the original spill, were the first ones to initiate an orchestrated effort to respond to its risks. This is the essence of the ecology of health in urban spaces—concentrated hazard in areas with limited abilities for protection.

Urban contexts have the power to influence our health. Yet, because we are spatial creatures who have the ability to shape and reshape these spaces, we also have tremendous potential to influence everyday life and health (Lefebvre 1991). This has led some social observers to state emphatically that those who manipulate the physical environment—architects, planners, and developers—have great capacity for good or ill. We owe the cultural map of structural change not to novelists or literary critics, but to architects and designers. Their products, their social roles as cultural producers, and the organization of consumption in which they intervene create shifting landscapes in the most material sense. As both objects of desire and structural forms, their work bridges space and time. It also directly mediates economic power by both conforming to and structuring norms of market-driven investment, production and consumption (Zukin 1991:39).

This chapter examines the nature of these constructed environments and the roles they play in everyday life. We explore architected spaces, how they have changed over time, and the significance of this change on human experience. These interior spaces are particularly important territories because we spend so much time in them, yet we are only beginning to understand their impact on everyday life and health. We then examine urban macro environs, the neighborhoods, communities, and metropolitan regions in which we live with untold and unknown others. While more careful investigations have been done of these macro environs than

of interior spaces, their impact on the health of residents has not been systematically explored until recently. In this chapter the significance of these spatial structures for everyday life is described, and the unique aspects of cities that shape the urban experience are identified. Using a traditional definition of the city, we then identify dimensions of the urban space that vary from one area of the city to another, affecting the quality of life experienced there. We also discuss the role of economics and fear in promoting the varying landscape of hazard. The understanding of urban ecology developed in this chapter is used in Chapter 4 to build a synthetic theory of health and place.

Micro Environments

The Evolution of Residence

One of the consequences of the urbanization of societies has been the development of a marked separation between public and private spheres. The emergence of the spatial division between public and private has created new opportunities for self-consciousness and self-development (Braudel 1979; Lofland 1973; Tuan 1982). In turn, these new spatial distinctions between public and private satisfy a basic territorial need presented by modern cultures emphasizing individuality (see earlier discussion in Chapter 2). As such, modern urban persons find new places and opportunities for personal growth and development of “rootedness.” In her best-selling memoir *Under the Tuscan Sun*, Frances Mayes (1997) underscores the significance of one form of constructed space—the home as an aspect of self:

I have just bought a house in a foreign country. . . . The house is a metaphor for the self of course, but it is totally real. And a foreign house exaggerates all the associations houses carry. Because I had ended a long marriage that was not supposed to end and was establishing a new relationship, this house quest felt tied to whatever new identity I would manage to forge.

(pp. 1, 15)

From this point, the book weaves an intriguing account of the author's reflections on house as metaphor for self, providing a personal tale of how a change of scenery can both renew and remake lives. It underscores the notion that we are spatial creatures who seek satisfaction of our needs in places, and have deep personal ties to home territory. More than spatial beings, we are place-oriented creatures. Place is the immediate and intimate portion of the lived environment. It is the site or location for events, but it also has more personal significance than serving as a context for experience. Places are locations of felt value; attachment to place is viewed as a basic human need, important for identity and connection (Eyles and Litva 1998). "To have roots in a place is to have a secure point from which to look out on the world, a firm grasp of one's position in the order of things, and a significant spiritual and psychological attachment to somewhere in particular" (Relph 1976:38). It can be understood as standing for the human interactions which occur in a location, that is, as a representation of lived experience and of the larger life biography of the individual (Fullilove 1996). This link between place and self is thought to have been accentuated with the growth of cities and changes in residential architecture (Tuan 1977, 1982).

The geographer Yi Fu Tuan (1982) suggests that since the eighteenth century in the West, an ongoing process of "interiorization" has occurred in the built environment of cities. In the ancient and medieval city, public and private, exterior and interior, were mixed together in ways we would find quite confusing today. Lofland (1973) describes how we might feel in such spaces:

Too many people crowded into too small a space; too many odors, most of them offensive; too many sights, most of them vile. You can't get away from the beggars and vendors. They accost you wherever you go. You can't escape the crippled limbs, the scarred faces, the running sores. Your person seems never safe from the constant assault of pickpockets. Everything seems jumbled together. Rich and poor, health and disease, young and old, house and business, public and private. All seems disorder. All seems chaos.

(p. 33)

That seeming chaos was gradually eliminated in the industrial city through the use of barriers, both real and imagined. While this process of erecting barriers and more clearly defining territories touched all aspects of city life, it is best exemplified by the history of housing.

Home spaces have deep-rooted significance for all humans. The home is a “backstage area” where people can relax social conventions and enjoy more intimate social relationships. It provides more than shelter. What a house “does supremely well is to make the character of the human world vividly present to the senses and to the mind” (Tuan 1982:52). By erecting barriers to the outside world, it shields the household from the distractions of open, undifferentiated public spaces. It affords a degree of privacy, which comes to be expected and required in modern culture. In providing privacy, it creates the possibility of a distinctively personal world, not only permitting self-development but also reflecting aspects of the self.

Imagine the tyranny of a home without rooms or privacy. American culture encourages intense self-awareness and a strong, even exaggerated belief in the power of the individual. Such values had no chance for developing in the architecture of the past, and in some homes today, it continues to be difficult to achieve because of overcrowding, or poor or older design. In these spatial circumstances the place of the individual in domestic life may be unclear. Certainly, earlier rural farmhouse architecture and the tenement and townhouse structures of cities earlier in this century did not meet these needs. In the city, heavy concentrations of multistoried dwellings, with shared-wall construction, close proximity to public sidewalks, and severe cooling difficulties made for an environment where public and private space could not be easily distinguished. The often family-constructed farmhouse had a different set of problems. While it focused and concentrated on family life, and effectively sheltered the family from the public eye, it often afforded almost no privacy. The rural home brought family together for entertainment, work, and sleep, but the floor plan of these homes made retreat from other family members difficult. It was an architecture that effectively promoted sharing at the cost of individuality and freedom.

The suburban tract house makes privacy far more accessible to many Americans. Interior spaces are functionally segregated, while exterior

spaces are clearly divided into public and private areas, with back yards and front yards serving distinct functions. Public traffic is regulated by limiting through-traffic and by creating natural buffer zones. Additionally, the technology of the modern home permits greater public-space avoidance (TVs, DVD players, video games, cell phones, computers, internet access, e-mail, iPods, etc.) by making it less necessary to leave the home to satisfy needs and desires. It also creates great separation between family members themselves through personalized electronic entertainment. The superiority of suburban living lies in this segmentation of space, which allows the individual to be alone, to explore and deepen their own sense of being. In the isolation of one's house and the privacy of one's room, it is possible to think seriously and at length and to avoid scrutiny (Tuan 1982:181–82).

While increasing spatial segmentation makes for growing self-consciousness and increases personal liberty, there are two potential problems with this feature of modern residential environments. First, as Tuan suggests, this architected liberty allows the self to turn inward, but in so doing it can also become fragmented and lose its sense of connectedness. A sense of self, after all, comes only with a developed sense of society (Cooley 1922). This growing fragmentation of space in neighborhood and home, while potentially satisfying a basic spatial need of modern culture, can go too far. As communities and families turn more and more inward, there is the potential of losing sight of the whole. In such cases, individual tolerance of others may be threatened. Indeed, evidence suggests that the growing segmentation of urban society has promoted the growth of individualism at the expense of intergroup tolerance, public civility, and social capital at the individual and community levels (Fischer 1981; Putnam 2000).

A second negative outcome of this architecture is that it is not available to everyone. Most notably, persons residing in older, poorer areas of the city are likely to find privacy difficult to obtain. It is uncertain whether this situation in and of itself creates developmental problems for those residing in such households. Evidence presented in the last chapter, however, suggests that in such surroundings, children are likely to spend more time away from home in areas less likely to be under the surveillance

of responsible adults (Gove et al. 1979; Mitchell 1971). Under such circumstances, children may be exposed to high environmental risks while at the same time finding typical sources of protection (particularly within the family) less available.

The Artificially Constructed Environment

In addition to the interiorization of urban life and its impact on public and private use of space, the modern industrial period is also characterized by the growing significance of artificially constructed environments. That is, architected spaces regulate not only social environmental experiences, but physical ones as well. As Ralph Taylor has suggested, however, “nature is a basic human need” (Gallagher 1993:20). Countering that need is the fact that almost all of our time is spent away from the natural world. Indeed, time-use surveys report that, on average, American adults spend a little more than an hour outside in an entire day, with the other 90 percent spent in buildings and vehicles (U.S. Environmental Protection Agency 1999; Robinson and Godbey 1997). That figure represents a significant change from the past, where more time was spent in public places and outdoors to carry out daily activities (Tuan 1982).

What are the consequences for everyday life and health of this shift to a predominantly artificial environment? Winifred Gallagher (1993) suggests that the shift to architected settings can have great impact on our emotional and physical well-being. This impact is perhaps most pronounced in extreme environmental conditions:

“You look around Anchorage in July, and you could be in a lot of places,” says John Booker. The window of his office at the university duly frames the very picture of the idyllic American campus. . . . “If you saw how much trouble it is to maintain the population here a few months from now, however, you would understand that this is a fairly artificial environment, and the farther north you go, the more that’s true. Maintaining a business-as-usual nine-to-five attitude here in December puts us at odds with what’s going on outside to an

extreme degree, as well as requiring a lot of money and effort. To keep a half a million people in Alaska year round is something like operating in an outpost on the moon.”

(p. 40)

While advanced technologies permit us to live in even the most forboding circumstances, research suggests that the more a population lives in conflict with what is actually happening in nature, the more cases of seasonal affective disorder (SAD) it is likely to have (Lurie et al. 2006). Persons with seasonal affective disorder experience clinical depression seasonally, most frequently in winter, with some cases recurring in the summer. Researchers link variations in light and temperature to the depressive symptomatology that accompanies SAD (Bernson 2002; Magnusson 2000). The most effective treatment for winter-based SAD is light therapy, in which patients are exposed daily to bright artificial light for brief periods. In many cultures, light is associated with positive qualities, while darkness with negative ones. The Shakers had a deep appreciation of the tie between light and well-being, painting walls white and using groups of large windows to maximize natural light. “Good and evil are typified by light and darkness. Therefore, if we bring light into a dark room, the darkness disappears, and inasmuch as a soul is filled with good, evil will disappear” (Eldress Aurelia Mace, quoted in Gallagher 1993:47). As Shaker architecture suggests, built environments can effectively regulate and supplement lighting conditions and affect mood, but how many buildings in contemporary society do this well? While indoor lighting can easily be regulated, not enough is known yet about lighting design for health promotion, a fact that takes on added significance as new forms of lighting are being introduced to promote energy conservation (Frumkin 2003).

Temperature can also be regulated. This regulation can be important under extreme conditions, because cold has the effect of stimulating behavior, while heat acts as a sedative (Gallagher 1993). When cold, we feel compelled to keep muscles moving in order to stay warm, while heat seems to urge muscles to rest. The interiorization of space use thus can reduce the behavioral consequences of extremes in temperature. But the

impact of heat regulation on SAD is unclear at present. While some have argued that summer's heat may trigger mechanisms in the body that mimic symptoms of depression (extreme fatigue, lack of energy, increased need for sleep), this conclusion is controversial (Gallagher 1993; Wehr and Rosenthal 1989). Indeed, some argue that those experiencing depression in summer months may have mood slumps. Their need to escape the heat leads to light deprivation from being indoors for longer periods of time, rather than to a direct physiological response to the heat outdoors.

The interiorization of living environments appears to give a false sense of control over nature, and produces a feeling of being apart from it. Nature is somehow that which is out there. Yet while urbanization and interiorization have effectively removed nature from most of our daily experiences, the human species evolved in a natural world. Nature not only is a human need, it is diminishing in terms of its availability.

The growing separation from the natural world is but one health-related issue wrought by interiorization. As the technology surrounding architected spaces has expanded, new substances and new mechanical and electronic devices have been introduced into the home. This creates the potential for new, though little understood, health challenges. In recent years worries about building materials have risen, with special concern being given to the materials contained in older homes. Asbestos removal became a national priority as the link between asbestos and cancer was established. Lead toxicity also became a critical public health issue, particularly for children. The negative effects of lead poisoning for children include reading and learning disabilities, lowered IQ, hyperactivity, neurological deficits, kidney and heart disease, as well as speech and language handicaps. These hazards are most highly concentrated in older, poorer neighborhoods (Aldgate et al. 2004; Costello-Wilson et al. 2005; Hack et al. 2005). That concentration is precisely why a known public health problem identified in the 1960s did not begin to be addressed until much later (Harvey 1997). As Harvey notes, economic dynamics fashion a logic of injustice: "The costs of lead removal would either drive rents up or render inner city landlordism for the poor so unprofitable as to exacerbate already serious problems of housing

abandonment in inner city areas” (p. 89). Defiance of this logic requires the dissemination of information as well as political action. Getting the word out effectively on the risks associated with these materials, and the testing and treatment available, will depend in part on neighborhood social networks and the level of attachment that people have with certain places.

Growing interest in the “sick building syndrome” has focused attention on indoor air quality as a health determinant (Burge 2004; Frumkin 2003). Air quality is a problem in both old and new buildings (Roodman and Lenssen 1995). Dust in the home and workplace is a significant carrier of toxins. Dust particles contain a range of materials including pet dander and human skin, fibers, insects, mold spores, pollen, dirt, and various soil components and contaminants. It is currently estimated that two-thirds of these noxious materials come from sources outside the home (Layton and Beamer 2009). In recent years, however, the issue of indoor air quality has focused on materials incorporated into new home construction. Evidence is accumulating that a range of building materials can have a significant negative impact on health. Glues, paints, and sealants often emit harmful gases, so that the use of products and materials with high levels of volatile organic compounds (VOCs) can produce health problems for residents. Plywood in cabinets and flooring often contains formaldehyde that can be released into the air, while carpeting and padding containing manmade fibers often release harmful gases. Canada has developed incentive programs to minimize the use of these materials in domestic construction; the United States, however, has not followed its lead.

Macro Environments: Cities as Unique Environments for Living

Just as the house presents unique opportunities and challenges for human development and health, cities are distinct contexts with their own health implications. An underlying assumption of many urban sociologists has been that cities were unique environments for living and that the city’s distinctive features shaped the experience of urban residents. The most famous articulation of this perspective was Louis Wirth’s 1938

article “Urbanism as a Way of Life.” Wirth defined cities as large, dense, permanent settlements of socially heterogeneous individuals. He believed that these three qualities of the urban space produced an environment with greater potential for anonymity, social isolation, and impersonalization. Urban spaces had the potential for promoting pathological behaviors and unhealthy places.

While considerable research and writing following Wirth’s original article provided only mixed support for his characterization of the city as a pathological environment, the sheer immensity and diversity of urban communities was believed to have real consequences for everyday life (Fischer 1975; LaGory and Pipkin 1981; Reiss 1959). City experiences were fundamentally different from suburban or rural ones in several ways:

1. *Complex patterns of interaction.* The urbanite has the possibility of initiating an enormous number of social ties, given the high density of urban settlements (Fischer 1975; Milgram 1972).
2. *Exposure to strangers.* Because of the large number of residents and their diverse characteristics, urbanites share the community with many unknown others (Lofland 1973).
3. *Exposure to unconventional norms.* The scale and heterogeneity of urban life is also likely to foster opportunities to explore unconventional behavior patterns and ideas (Fischer 1975).

The significant scale of urban settlements can make social life more stimulating and complicated. Stanley Milgram (1972) talks about the implications of urban complexity for everyday life, arguing that it creates the potential for a unique pattern of public behavior. Urban stimuli can be overwhelming, with sights, sounds, and smells coming too fast to be processed effectively by residents—as a result *stimulus overload* is possible. Humans’ ability to process information is physiologically limited. It follows, then, that the city resident’s capacity to recognize the potentially large number of fellow urbanites is limited. The “overloaded” urbanite is unable to absorb all the information from this complex environment either because there are too many stimuli to process or because stimuli are

coming too fast. When such overloads occur, the urban resident copes, Milgram believed, by selectively reducing stimulus inputs. This can result in a lifestyle of seeming indifference, particularly in public places where individuals may feel especially vulnerable. Coping with complexity may mean ignoring the countless unknown others who share public space.

The blank, nearly expressionless faces of urban pedestrians provide one example of this adaptive ability. For urbanites, most of the people sharing public space with them, whether it be a subway, sidewalk or market place, are nonpersons to be maneuvered around.

(LaGory and Pipkin 1981:39)

The stance of indifference may also produce a situation of *diffused responsibility* and inaction in a situation that normally would command immediate response. One often-used example of diffused responsibility is that of Kitty Genovese, a young woman who was raped and fatally stabbed outside her Kew Gardens apartment in Queens. While at least 38 people witnessed the attack, no one called police until 35 minutes after the assault began, despite the fact that many witnesses watched from the safety of their own apartments. One explanation of this pattern of non-response is that the large size characteristic of urban settings falsely reassures people they have no moral responsibility to respond to someone else's crisis because others are likely to take responsibility. In short, the scale of urban contexts, like the Kew Gardens residential complex in Queens, tends to shift responsibility from the individual to the aggregate. Darley and Latane's study of bystanders (1970) suggested that urbanites are not typically uncaring about other's troubles. However, when an incident occurs, witness behaviors appear to be a function of the size of the crowd. That is, the more witnesses, the less likely that someone will intervene. This stance of non-response is often characteristic of urban areas with heavy concentrations of poor minorities (Suttles 1968; Wilson 1996). Such evidence reinforces Wirth's view of the city as impersonal and alienating. It has been suggested, however, that these outcomes are not inevitable.

Indeed, there are circumstances in which the urban context actually serves to promote a sense of belonging, shared identity, and responsibility. Fischer (1976) argues convincingly that urban scale, instead of destroying social ties among residents, actually has the capacity to create and stimulate social bonds. He claims that large size promotes intense and varied social worlds in several ways:

1. Large communities attract migrants from a wider area than smaller communities. The wider the range of places from which migrants come, the greater the probability they will have diverse experiences and cultural backgrounds.
2. Large size produces greater structural differentiation in the form of highly specialized occupations and institutions, as well as special interest groups. Each of these special groupings has its own unique set of life experiences and interests.
3. Increased size, however, does more than simply stimulate diversity and a variety of social worlds. It provides a critical mass that actually intensifies subcultural experiences and promotes a strong sense of community identity. This critical mass transforms what would otherwise be a small group of individuals holding steadfastly to a set of beliefs and traditions into a vital, active subculture. For a culture to survive, certain minimal numbers are necessary to support the institutions that give the group its identity. In the case of an ethnic enclave this may simply mean enough people to staff the specialty shops, churches, newspapers, and clubs that service and sustain the group.

This tendency to promote diverse, small, and even unconventional social worlds is enhanced by the city's spatial structure. Contemporary cities are segregated places, and this segregation makes unconventional behavior possible by removing the smaller community from the social controls and expectations of the larger, more traditional society and its majority population.

The city's spatial organization, with its distinct pattern of sociospatial landscapes, creates a more personal world than that envisioned by Wirth

and Milgram (LaGory and Pipkin 1981). Tightly segregated local communities, places with a distinct sociocultural identity, can actually reduce the possibility of social isolation and alienation if what Taylor (1988) refers to as “territorial functioning” occurs within them. At the same time, these very settings (highly segregated and densely populated areas with high territorial functioning) may promote cultural isolation and discourage the formation of ties and identities outside the local area. The very same segregation that can be liberating for those with physical, economic, and intellectual resources can be debilitating for those with limited resources (Davis 1990; Massey and Denton 1993; Mitchell and LaGory 2002). That situation of high segregation and limited personal resources can create special problems for those living in areas of concentrated poverty. Segregation places real spatial boundaries on the free flow of information and social interaction. It can actually accentuate and intensify the poverty experienced by individuals, a point we explore later in this chapter.

This structuring of diversity via segregation presents particular problems for city residents as they venture out of their private residential worlds (homes and neighborhoods) into the larger public arena. Urban public space presents its occupants with a potential crisis of knowing (Lofland 1973). To carry out our daily activity in an orderly fashion, and to feel secure in settings populated by many personally unknown others, individuals must be able to anticipate answers to two related questions: (1) What do others expect of me in this setting; and (2) What can I expect of others here? Because the urbanite has no personal knowledge of the countless others sharing public space, they rely on established rules for coding and defining these unknown persons. The rules derive from cultural stereotypes triggered by spatial and appearance-based information. How a person looks, what they are wearing, where they are located, as well as the individual’s body language give cues that people use to provide information about the other’s expectations, intentions, and more. Fashion becomes a key ingredient in the public behavior of metropolitan residents. Clothing colors, styles, materials, and brands, along with body markings and hairstyles, communicate volumes about the personally unknown. In addition to fashion, certain physical qualities of individuals

are stigmatized (Goffman 1963), such as evident disability, disfigurement, racial differences, age, and hygiene. Taken together these become representations of the inner intentions and the personal qualities of the stranger. Hall (1966) and Lofland (1973) also note the importance of spatial cues in communicating intentions. Where persons place themselves in public space (an alley versus a square), their stance (standing, sitting, lying down), and the distance they keep from others are non-verbal communications that suggest the rules of engagement, and the expectations and intentions of others.

Besides these methods of negotiating public space, a process of privatization has occurred to some types of public spaces over the last several decades. The most notable is the privatization of concentrated retail business districts in the form of large covered malls. In these privatized spaces, access is controlled and well surveilled, providing a sense of security less available in downtowns (Davis 1990). These spaces are socially sanitized, homogenized spaces, legally capable of excluding socially stigmatized and disruptive elements. Mall shoppers will not find pathways littered with the pallets of the homeless, no beggars will accost them, no signs of political protest will be found. Because of this security, such places have drawn considerable pedestrian traffic away from traditional public districts in cities. Shopping centers now account for the majority of annual retail sales in fixed-space shopping venues, and the number of these centers has increased tenfold since the 1960s (Gottdiener 1994; Jacobs 1984). This retail restructuring further accentuates the already segregated nature of urban space, since most are located in the suburbs. Metropolitan areas are characterized by divided spaces and segregated places. These divisions often make it difficult to conceptualize a singular urban place because space is multidimensional.

The Dimensions of the Urban Mosaic

The urban space is distinctive because of the sheer scale and diversity contained within it. But because of the segregation that pervades this space, not everyone experiences urbanism equally. Obviously, residents of Village Creek do not come into contact with the same Birmingham as

persons living in the metropolitan area's outlying suburbs. Indeed, while the Dursban emitted from the downtown warehouse fire flowed through both inner-city Village Creek neighborhoods and outlying suburban communities, the experiences and responses to that incident varied by place.

Social Areas

The city is a mosaic of distinctive places, and the characteristics of these places can play a vital role in the everyday life of residents and the community as a whole. In the next part of this chapter we explore the nature of this mosaic of places (its dimensions and geometry) and its potential impact on community and individual experiences.

One of the distinctive features of cities is their spatial structure. Space is what keeps everything from being in the same place, and in so doing, space greatly differentiates urban life. People's experiences in a metropolitan area are shaped by a variety of contextual factors or dimensions linked to spaces. As already suggested, the urban qualities of space can be characterized as scale (size and density) and diversity. These qualities of urbanness, however, vary by place. Different places in the mosaic afford different levels of scale and diversity; the diversity of places is a function of the social characteristics of its occupants and the uses to which the space is put. Research and theory in urban sociology suggest several social characteristics by which neighborhoods may be segregated in contemporary metropolitan areas (LaGory et al. 1980; Shevky and Bell 1955). These dimensions include socioeconomic status, race/ethnicity, and age/family status, though each is somewhat independent of the other. These independent social components of place allow for a variety of dimensional combinations, producing many unique social spaces and social experiences (e.g. high-status young White neighborhoods, high-status young African American neighborhoods, etc.).

While there is some disagreement over the factors affecting the quality of participation in different places, social area analysis contends that the neighborhood context, composed of a unique combination of neighborhood social characteristics, creates a "climate" for interacting with

neighbors (Bell and Force 1962; Greer 1956, 1960; Greer and Kube 1972; Greer and Orleans 1962; LaGory and Pipkin 1981). In essence, the degree to which people are segregated according to these dimensions is evidence of the strength of a particular “social climate” in the neighborhood. It not only shapes the personality of a place, but also encourages distinctive patterns of local interaction.

Social climate, by affecting patterns of local association, influences the degree of community attachment—an indicator of the significance of local place in the person’s everyday life. Greer’s (1956, 1960) early work on social areas demonstrated clear differences in patterns of neighborhood interaction between places characterized by large numbers of households with a married couple and children (high-family-status areas), and places characterized by single-person households, or households consisting of a couple with no children (low-family-status areas). High-family-status area neighbors define close-knit local ties as a critical feature of neighborhood life; residents of these places participate actively in the local area. They interact with neighbors more, have more neighborhood friends, and participate more in local voluntary organizations. Those in low-family-status areas, on the other hand, see locations near amenities and work, and neighbors who keep to themselves, as critical ingredients of a good neighborhood. As might be expected, people in these areas are less likely to develop friendships with neighbors. They are more likely to see the neighborhood as a location, rather than a place of social attachment. Work by Bell and Boat (1957) and Greer (1956) further confirms the importance of these contextual characteristics. Social participation in the local area is a product of social context and not just the individual’s personal characteristics (Fischer and Jackson 1976; Sampson 1988). For example, while not all neighbors in a high-family-status area will have large families or will even be married, their participation behavior will have more in common with others in the neighborhood than their family-status equals in other types of neighborhoods (Timms 1971).

Two other characteristics of neighborhoods have been shown to affect the level of place attachment—neighborhood residential stability and the neighborhood’s location in the metropolitan space. Residential stability,

the average length of time residents have lived in the neighborhood, appears to be important to the number of local friendships, the degree to which people feel attachment to the local area, and the extent of participation in community activities (Sampson 1988). People who have been in a neighborhood longer are likely to have more local friendships and social supports, and these place linkages, in turn, strengthen the residents' sense of community attachment and territorial functioning. Hence, areas in transition may also create a climate of "placelessness" or rootlessness.

In addition to the social characteristics of the neighborhood, its residential stability, and social climate, location is important for neighborhood interaction (Fischer and Jackson 1976). Suburban areas further from the center have higher levels of local participation. While social-area analysts look exclusively at the role of social characteristics in affecting the local experience, location has long been considered an important aspect of the social space. Local intimate ties exhibit a gradient effect. Geographers have shown that residents' potential ties are conditioned by location, with the probability of local social contact affected by the level of contact opportunities (residential densities, level of territorial functioning, extent of physical barriers to interaction, etc.). These contact opportunities often vary by location (LaGory and Pipkin 1981). Although location seems to matter less than ever before in terms of defining the social networks and supports people use in their everyday lives, place still matters. For all social classes, strong ties fall off as distance away from the individual's residence increases (Fischer and Jackson 1976). Distance is a particularly important issue in areas with limited transportation options.

Location Models

For many years urban ecologists devoted a great deal of attention to the structure of the urban mosaic and the location of social areas within the metropolis. The research concluded that metropolitan areas were organized into a collection of distinctive social and economic spaces. This segregation was multidimensional, with a predictable pattern to the location

of places in the urban space. The earliest models of the industrial city portrayed urban areas as consisting of segregated residential spaces organized in distinctive zones or districts. The concentric zone model depicted a central urban area where slums were concentrated around a business and industrial district (Park et al. 1925). The quality of residential areas varied by distance from this central area of commerce, with the status of neighborhoods increasing in successive bands away from the center. According to this view, the deterioration of residential areas is a direct result of expanding economic activity at the city center. Slums emerged near prosperous business areas because land speculators allowed residential areas to deteriorate in anticipation of making higher profits on the land in the future as a non-residential property. In addition, encroaching businesses increased the hazards to residents by attracting more traffic and introducing more noise and pollution into the area. Hence, the environmental risks associated with growth tended to accrue disproportionately in the area immediately surrounding the central business district. Later models of the industrial city disputed the impact of the central business district on residential arrangements (Hoyt 1939) and suggested that the metropolis contained multiple centers of concentrated economic activity (Harris and Ullman 1945). While these models disagreed with the single-center view of urban development, all depicted a situation in which poverty concentrated around areas of economic activity associated with significant environmental hazards such as manufacturing and warehousing districts. In addition, these concentrations of poverty seemed to serve as buffer zones between certain hazardous areas and higher-status residential groups.

Metropolitan regions are no longer dominated by a single economic center. Indeed, suburban rings often display heavy concentrations of businesses, jobs, and office buildings surrounding shopping malls. These so-called "edge cities" are the high-growth areas of the contemporary metropolis, yet they bear little resemblance spatially to the central business districts that were the economic centers of past urban forms. They are not always characterized by a dense collection of high-rise buildings, they are not usually politically organized, nor do they have clearly defined centers and edges (Garreau 1991). Perhaps the most notable distinction,

for our purposes, between the modern urban space and earlier structures, however, is in the social and economic processes that produce areas of concentrated poverty in the new post-industrial metropolis.

The development process is sometimes far less patterned in post-industrial cities than in the earlier industrial cities described by Chicago School sociologists. Michael Dear (2002) refers to post-industrial development as “Keno capitalism,” a game of chance.

Capital touches down as if by chance on a parcel of land ignoring the opportunities on intervening lots . . . The relationship between development of one parcel and non-development of another is a disjointed, seemingly unrelated affair. While not truly a random process, it is evident that the traditional, center-driven agglomeration economies that have guided urban development in the past no longer generally apply.

(Dear 2002:24)

Just how patterned or unpatterned development is in post-industrial cities is debatable (see the inaugural edition of *City and Community*, Dear 2002, 1:5–58). What is not debatable, however, is that slums and deteriorating neighborhoods are no longer a product of center-driven economic expansion, but of a loss of work in certain areas of the city (Wilson 1996). The high-poverty areas of contemporary American cities have experienced a steady loss of the type of work that their residents are capable of performing. The global economy characterized by flexible production and the growth of producer services fuels the expansion of edge cities at the expense of the urban core (Dear 2002; Greene 1997; Sassen 2000). This flexible production also leads to areas that experience quick turns of fortune from boom to bust.

While inner-city areas in industrial societies have always featured concentrated poverty, for the last several decades there has been an increase in the concentration of African American poverty and joblessness in the inner city and some older suburbs. As Wilson notes (1996), a neighborhood containing poor employed people is a different place from one with poor and unemployed residents. This is the distinctive feature of

post-industrial ghettos—high levels of poverty and unemployment. Economists began to notice a trend in this direction as early as the 1950s, when traditional urban manufacturing and retail activities began to decentralize. By the next decade they were writing about the growing mismatch between jobs and the skills present in residential areas nearest these opportunities (Kain 1968). Kain suggested that the levels of underemployment and unemployment in predominantly African American inner-city areas were growing because of this spatial mismatch. The lower-level skills of the inner-city labor force contrasted with the high skill levels required of job categories growing fastest in the center city (banking, administrative, and communication-related activities). Since the 1970s, large American metropolises have experienced a dramatic polarization of social space, with large principal cities developing dramatic concentrations of ethnic poverty and joblessness (Morenoff and Tienda 1997). Paul Jargowsky (1997, 2003) demonstrates the pervasive nature of this intensifying concentration of the poor in principal cities, ethnically segregated neighborhoods. His review of census tract data for the United States from 1970 to 2000 reveals the dimensions of this spatial polarization:

1. While the number of poor in metropolitan areas grew by 37 percent during these 20 years, the number of poor residing in high-poverty neighborhoods (tracts with 40 percent or more of total households below the poverty line) rose by 98 percent.
2. The number of poor persons living in high-poverty neighborhoods nearly doubled, from 1.9 million to 3.7 million.
3. The number of high-poverty neighborhoods more than doubled, suggesting the spread of urban blight.
4. Urban poverty concentration varied dramatically by race. The greatest concentrations of urban poverty were for African Americans.
5. One out of every three African American poor now lives in high-poverty neighborhoods, while only 6 percent of poor Whites live in highly concentrated areas of poverty.
6. By 1990, half of all high-poverty neighborhoods were Black ghettos. Almost all of the growth in high-poverty neighborhoods took place in principal cities.

7. While the concentration of minority poverty eased somewhat in the 1990s (Jargowsky 2003), recent economic and housing changes associated with the worst recession since the Great Depression have exacerbated problems for the urban poor, leading to a continuation of the trend toward ever-expanding high poverty ghettos (Kneebone and Berube 2008).

This tendency toward the growth of high-poverty neighborhoods is significant because in such places people must deal not just with their own poverty, but with the poverty of those around them. The high degree of stress associated with personal poverty is thus magnified by a contextual effect—a situation with obvious consequences for the physical and mental health of residents. Daily life for the high-poverty ghetto resident is characterized by the confluence of personal and contextual stressors associated with impoverished lifestyles and racial discrimination (Smith 1988).

Although the new urban sociology downplays the distinctive nature of the metropolis's inner-city and outer-city areas (Dear 2002), with much being made of the fact that suburbia is not a singular homogeneous place, real differences remain in the social areas of the city. The deconcentration of the metropolitan region is a reality linked directly to economic and political forces in late American capitalism (Gottdiener 1985) and the global economy (Sassen 2000). The shift of industrial jobs from the central city to the suburbs, to the Sunbelt, and to foreign countries has accentuated the divisions between inner city and outer city (Jargowsky 1997; Wilson 1996). The deconcentration of the metropolitan region stands in sharp contrast to the heavy concentration of minority poverty.

Where people live in the deconcentrated metropolitan region makes a difference in their own health and welfare. The metropolis is a highly segregated place consisting of many distinct social areas. The scale of life and the social characteristics of residents vary widely. These factors affect the social climate and ultimately the level of attachment people have to the local residential space. In turn, various places in the metropolis afford different access to resources and opportunities and different levels of exposure to hazard. Together, these differences create a mosaic of social

and health experiences in the metropolitan region—a wide and very visible divide.

Capitalism and Landscapes of Hazard and Despair

The divided landscape of the contemporary city is a consequence of powerful social and economic forces. Places are social spaces transformed by users not only into areas of everyday interaction but also into commodities. That is, not only do the neighborhoods and houses of residents have intrinsic value as the home where people live and carry out their daily lives, they also have value as a commodity to be bought and sold in the real estate market. Various locations have both “use value” and “exchange value” (Lefebvre 1974; Logan and Molotch 1987). In some sense, this is one aspect of the distinction between place and space—place being a complex *phenomenon* intertwining personal, cultural, and social factors, and space being a *container* of objects and locations with measurable dimensions. Exchange value and use value, however, are not merely complementary views of the same thing; rather, they are competing ways of valuing locations. This conflict plays itself out in metropolitan areas in ways that do more than constrain the choices of friends and role models in neighborhoods. It literally shapes the urban landscape, determining the location of activities, resources, hazards, people, and ultimately the life chances attached to residents in various segments of the urban mosaic. Its consequences can be catastrophic for some.

The link between urban space and markets is ancient, but as Logan and Molotch (1987) point out, the commodification of place in the United States represents a near-idealized version of capitalism’s transformation of the urban landscape. While the early industrial period promoted urban growth and linked markets to places, as capital became more portable in the global economy the idea of place has been trivialized (Zukin 1991). The use value of place yields to its exchange value in this economy, and exchange value is determined by forces in a placeless, often unregulated global realm. The same industrial product can be produced now in a variety of places throughout the world, so the jobs involved in manufacturing these products can also be quickly shifted. As Zukin

(1991) suggests, this is the basic problem confronting modern communities—capital moves, communities do not. As capital decouples from place, spaces become commodities responding to ever-shifting international economic forces. Capital shapes and controls the urban ecology. Ultimately the same forces that built an urban space can destroy it, and residents can do little about it except move.

At the heart of modern capitalism is energy of creative destruction (Schumpeter [1934] 1961). Capitalism involves recurrent innovation, innovation which leaves in its wake a pattern of destruction in which “capital creates and destroys its own landscape” (Zukin 1991:19). Thus, in addition to referring to the metropolis as a mosaic of social worlds, we can describe it as a landscape of uneven development with enormous discrepancies in the socioeconomic conditions of the city’s social areas. Cities are acutely polarized places, divided up into “fortified cells of affluence and places of terror where police battle the criminalized poor” (Dear 2002). The structural reorganization of center-city economies touches most directly the lives of people already poor. As low-skill jobs decline dramatically with economic restructuring, economic deprivation accelerates in those areas that in the past may have been contiguous to development. This deprivation not only changes the opportunity structure in these areas, but also transforms their social climate. Places that have experienced a decline in low-skill jobs are eventually touched by higher crime rates and a general environment of violence (Shihadeh and Ousey 1998). In this sense, the undulations and rhythms natural to capitalism produce devastating ecological changes, creating the context for fear, hopelessness, and placelessness.

The link between the ecology of opportunity and the ecology of hazard is deeply entrenched in global capitalism, shaping landscapes of fear and despair. One of the best predictors of the location of toxic waste dumps in the United States is the geographical concentration of people of low income and color (Harvey 1997). Chicago’s Southeast Side is a case in point. A predominantly African American area with more than 150,000 people, it has 50 commercially owned hazardous waste landfills and more than 100 abandoned toxic waste dumps. Not surprisingly, it also has one of the highest cancer rates in the United States (Bullard 1994).

The environmental justice movement draws direct attention to the nature of the problem. Harvey (1997) reviews the political-economic dynamics of this concentration of hazard. First, the location of toxic dumps is less costly in low-income areas and also has less impact on property values in these places. Second, a small transfer payment to cover the negative effects of location may be significant to the poor, while basically irrelevant to the better-off. This situation is particularly paradoxical because the rich are unlikely to give up an amenity at any price, and the poor, who can least endure the loss, are likely to give it up for a mere pittance. Third, the poor generally live in areas with weak political organization and hence are unable to resist the relocation of health-depriving hazards. These economic forces obviously produce environmental injustices and a vastly uneven terrain of hazard and risk in cities. Not only is the world a more hazardous place than ever before, but these dangers tend to be more spatially focused. The concentration of hazard, noted by urban ecologists since the 1920s, has increased in the last 30 years in American cities.

The accelerating and spatially deepening uneven processes of “creative destruction” leave urban communities uprooted and displaced while propelling others on to new dizzy and commanding heights. . . . For the privileged—who are able to benefit from new technologies, new multimedia and modes of communication— movement, access and mobility have been augmented. . . . Meanwhile, there are those on the receiving end of this process—like the impoverished, the aged, the unemployed . . .—who have increasingly been imprisoned by it.

(Merrifield and Swyngedouw 1997:12)

While hazard and danger have concentrated in high-poverty ghettos, fear has concomitantly intensified in middle-class areas. This divide, and the ecology of fear that it perpetuates, are precisely what Wilkinson (1996) had in mind when he talked about unhealthy postmodern societies. Understanding the shape of this uneven landscape and the processes that underlie it is essential to understanding the patterned

inequality of health. Ultimately, as Wilkinson (1996) notes, it is also essential to understanding and addressing the significant health costs that accrue to wealthy social systems with such disparities.

The dramatic spatial inequality of postmodern American cities has deep consequences for the health of all metropolitan residents. The vast spatial divide between inner and outer city courses like a polluted stream through the very heart and soul of the American metropolis. The result is an “ecology of fear” that pervades urban areas from richest to poorest (Davis 1990, 1998).

The carefully manicured lawns of Los Angeles’s Westside sprout forests of ominous little signs warning “Armed Response!” Even richer neighborhoods in the canyons and hillsides isolate themselves behind walls guarded by gun toting private police and state-of-the-art electronic surveillance. . . . In the Westlake district and the San Fernando Valley the Los Angeles Police barricade streets and seal off the poor neighborhoods as part of their “war on drugs.” In Watts, developer Alexander Haagen demonstrates his strategy for recolonizing inner-city retail markets: a panopticon shopping mall surrounded by staked metal fences and a substation of the LAPD in a central surveillance tower.

(Davis 1990:223)

Los Angeles is just one example of the consequences of late capitalism’s landscape of creative destruction, where the defense of luxurious lifestyles in the outer regions is translated into a fortified urban ecology where “fortified cells” of affluence are separated from “places of terror” in areas of concentrated, minority poverty (Davis 1990). This is not merely a reproduction of the old ecology noted in urban sociology textbooks from the 1920s through the 1970s; it is brought about by revolutionary economic forces that ruthlessly divide society and intensify in cities the most malevolent aspects of postmodernity.

The “Second Civil War” that began in the long hot summers of the 1960s has been institutionalized into the very structure of the urban

space. The old liberal package of social control, attempting to balance repression with reform, has long been superseded by a rhetoric of social warfare that calculates the interests of the urban poor and the middle classes as a zero sum game.

(Davis 1990:224)

While capitalism plays a critical role in shaping the landscape of fear and hazard in cities, the federal government has also left its imprint on city space. Dear and Wolch (1987) argue that service-dependent inner-city areas have arisen, in part, from the deinstitutionalization movement in North America. Deinstitutionalization was intended to remove the mentally disabled, physically handicapped, mentally retarded, prisoners, and other groups from confining institutional settings and place them in more “normal” residential settings. While well intentioned, it actually flooded local communities with service-dependent individuals. As institutions closed, the people discharged from them gravitated toward specific areas of the city, typically inner-city areas where they found affordable housing. “As dependent persons migrated to those urban locations (often from considerable distances outside the city), they attracted more services which themselves acted as a magnet for yet more needy persons” (Dear and Wolch 1987:4). This process further reinforced the ecology of fear and despair perpetuated by economic forces.

How Spatial Structures Affect Our Choices: A Constrained-Choice Approach

The foregoing discussions demonstrate the importance of place for the everyday experiences of metropolitan residents. While early urban analysts such as Wirth thought that the scale and diversity of urban life would lead to social disorder, that has not yet happened. But a fear of disorder does seem to have emerged at the same time that freedoms and opportunities presented by postmodern economies have been publicly touted. As we have already seen, Tuan (1982) argues that urbanization itself has led to an interiorization of domestic space and growing possibilities for self-development. Expanding choice is often noted as a

hallmark of urbanization (Baldassare 1977), yet choices in the metropolitan area are highly constrained by spatial factors.

Ultimately, most human problem solving requires spatial problem solving. Location is a critical factor in fulfilling needs because traversing space requires the expenditure of resources (energy, time, money). Following this line of reasoning, the city can be seen as a gigantic resource machine in which access to resources is unequally distributed in the urban space. The city is not only a mosaic of social spaces, but also a mosaic of resource spaces. Social and economic resources occur in fixed locations, and thus are more or less accessible to some than to others depending on the distance of these locations from the individual's home. People living in certain places will have greater access to social ties, services, and products than others because of the travel costs, both real and imagined. This so-called "friction of distance" is an important aspect of space's role in the human experience. While the friction of distance has declined dramatically with transportation and communication improvements, space continues to be significant for everyday choices and actions. These constraints are both behavioral and cognitive in character. Space imposes bounds on both our access to resources and knowledge of the resources available. The mental maps people carry around with them represent the horizons of their choice field, which, in turn, are shaped by location. A person born and raised in one section of a metropolitan area, for example, is unlikely to be aware of, or prefer, residential options available in other sectors of the metropolis (Johnston 1972).

To understand how space constrains choice requires knowledge of (1) the spatial dimensions that affect local experiences, and (2) the dynamics of human decision making. Scale and diversity are two essential aspects of the urban space. Both vary greatly across the metropolitan area, impacting the place's social climate by determining the number and type of options available in a given location. How scale and diversity affect a place's social climate and a resident's choices within that residential place is clearer when the parameters of human decision making are considered. Choice theories typically suggest that we make decisions based on a "satisficing" rather than "optimizing" strategy (Cyert and March 1963; Simon 1957). That is, we don't search endlessly for the best

option; rather, we stop when we find something satisfying within the parameters of our preferences and values. In essence, once satisfied, we stop looking for alternatives. This view of choice suggests a potentially important role for spatial arrangements in decision making. Satisficing behavior implies that moving across space requires effort and resources (time, energy, and money). Therefore, if satisfying options can be found nearby, people will make choices without seeking distant alternatives.

But choice involves more than cost considerations. Satisfaction is dependent on the options available and how they fit with our preferences. Two aspects of space, intimately tied to Wirth's notions of the city as place, affect the options available to people: (1) the number of options available in a given place (choice density), and (2) the degree to which these options have the qualities preferred by those choosing. Perhaps the most important type of options offered in a community are the social opportunities available in a place—most particularly the range of available friends. The number of available neighbors governs the number of interaction choices presented in a place. If the choice density of neighbors is high, each individual in the neighborhood will have a higher probability of finding satisfying interactions there. In effect each place has its own “carrying capacity for community ties” (Blau 1994). Sustaining these ties, however, is likely to be a function of how much persons have in common with one another. People who share a salient social identity are likely to share other things—homophily prevails in most social associations (Blau and Schwartz 1984; Lin 2001).

The significance of homophily for patterns of local association, however, is likely to be complicated. While a homophily principle may govern social associations, its effect on local patterns of neighbor interaction may vary, depending on which statuses are homophilous. If the homophilous status signifies great access to resources outside the neighborhood (e.g. high income and education), then dense, status-segregated neighborhoods could encourage extensive ties in the local area, but the ties are likely to be shallow and short term. On the other hand, if the status embodies need (e.g. low income, low education, minority status) then networks may be less extensive (because people have friends here out of necessity), but the ties may be deeper, involving more frequent contact

and greater intensity. Work by Campbell and Lee (1992) on 81 neighborhoods in Nashville substantiates the view that level of need affects the operation of the homophily principle. If, however, a neighborhood is characterized by residents with high need and pervasive fear, social networks may be further truncated. In such places, need and fear reinforce one another, producing detachment and very limited ties inside and outside the neighborhood.

Whatever the permutations, local ecology is important for community dynamics, and ultimately it affects the quality of residential life. The levels of choice density and social segregation vary widely across metropolitan areas, constraining social networks in some places while freeing up social ties in others, ultimately helping to shape the character of places. While some places have characteristics that promote dense and closed networks, others encourage open and wide-ranging social ties. Space matters greatly for the individual's experience, quality of life, and overall health. The spatially constrained choices of individuals accumulate and produce the neighborhood's social climate and its ability to relate effectively with the larger metropolitan institutional structure. In turn, these two factors, *social climate* and *linkages to outside resources*, are critical determinants of a neighborhood's "viability" (Schoenberg and Rosenbaum 1980). Research has demonstrated that the spatial dimension is an essential ingredient in the persistence of African American minority group status in the United States; the heavy concentration of Blacks in high-poverty ghettos has created special disadvantages that intensify the disadvantages of class (Massey and Denton 1993). The flood-ravaged Ninth Ward of New Orleans and Birmingham's Village Creek are but two examples among hundreds nationally of such places and their consequences.

Local Friendships

Table 3.1 considers the effects of spatial structure (choice density and social segregation) on the degree of intimacy within local social networks, other things being held constant. The situation of high homogeneity and wide choice noted in Cell 1 produces a pattern of

Table 3.1 The Intensity of Local Networks as Affected by Spatial Constraints

<i>Segregation</i>	<i>Choice Densities</i>	
	<i>High</i>	<i>Low</i>
High	Communal	Sociable
Low	Cosmopolitan	Unattached

Source: LaGory 1982:73.

communalism. In its ideal form this may produce a very cohesive social space, with strong social ties and dense social networks. Under conditions of high segregation and dense population, as well as significant socioeconomic constraints, highly localized intimate ties are probable because choice of local friendships is extensive, and potential to make friends of similar background and identity is high. Need intensifies this probability, with persons unable to bear the costs of transportation and communication with outside areas having an even greater likelihood of dense localized networks.

The degree to which these individualized spheres of confidants mesh together to form a strong community bond is highly variable, particularly in communities where the transient population is high. Under such circumstances, the opportunities for interaction may be high. The number of local ties, however, may be low because of limited territorial functioning and the lack of trust in an environment characterized by transience and limited personal knowledge of other neighbors. The presence of a great many strangers increases fear and distrust, which can minimize the potential of an area to produce a strong sense of community. "Fear proves itself" (Davis 1990). On the other hand, if the community is characterized by a small number of transients, then an idealized form of communalism is likely to develop. Under these conditions, the spatial characteristics described in Cell 1 can produce a vibrant local community.

Even under the more preferable circumstance of low transience, however, communal social networks present a difficulty to local inhabitants.

In a communal setting, networks are so tightly knit that there is an absence of “weak ties” (friends of friends) outside the local area (Granovetter 1973a; Massey 1990; Shrum and Cheek 1987). Hence, linkages to outside resources are minimized. As has been demonstrated, weak ties provide essential links to the larger political and economic resources in the metropolitan area and empower communities. These reduced connections to the local and regional power structure inhibit the influence such places can have over their own fate. Thus, even vibrant neighborhoods with strong social and cultural ties face dramatic challenges from the outside unless they have significant resources to resist such efforts.

The second cell represents spatial circumstances common in some suburban and rural fringe areas, as well as in racially segregated urban neighborhoods with high vacancy rates undergoing a period of decline. Here the local community is relatively homogeneous, but the range of intimate friends available is limited by low population densities. As a result, people have the possibility of maintaining local ties, but their ties are unlikely to be either intense (i.e. frequent or intimate) or extensive in character. As stated previously, need promotes this outcome. While residents in general are likely to participate in some neighboring, for those who can afford the costs of transportation and communication, friendships will likely be scattered in many places throughout the urban area (Fischer 1982). For wealthy neighborhoods, then, limited liability (i.e. few local obligations and strong ties) characterizes the social climate of places with Cell 2 spatial characteristics. Low-income neighborhoods, however, are likely to be disadvantaged because residents there will have limited ties to the outside (due to limited access to other areas), as well as the potential for limited local intimate ties due to choice limitations. Low-income and minority-dominated neighborhoods with these spatial qualities suffer from both limited political influence and an atmosphere of limited liability. If the neighborhood is also characterized by high transience, the social climate will exhibit even more detachment.

The circumstances described in both Cell 1 and Cell 2 of Table 3.1 suggest a situation in which those with already limited influence and resources (hyper-segregated minorities) find themselves in residential

contexts that exacerbate their sense of disconnectedness from the larger metropolis. While “communal” spatial conditions can promote a sense of place, residents’ dense social networks potentially neutralize these benefits. Such spatial conditions intensify the already negative effects of poverty and minority status by limiting the weak ties of residents. These ties are essential to accessing personal resource networks. Residents with only a few weak ties, or none at all, lack power and the ability to garner the resources to change their circumstances.

The third and fourth cells of Table 3.1 display neighborhood social patterns that evolve under conditions of low segregation. Greater variety in friendship options allows for more freedom in the formation of social networks. Homogeneity, on the other hand, enhances the stability of local friendships by increasing the probability of satisfying choices, with people from similar backgrounds and experiences having much in common. For people with limited resources, freedom of choice may be highly desirable under circumstances of high choice density (Cell 3). In cases where choice densities are high, a cosmopolitan community form is likely. Perhaps the best-known example of this is New York’s Greenwich Village, but most large cities have such places where an amalgam of ethnic, racial, and socioeconomic groups share residence, usually along with a number of urban amenities. These communities exhibit moderately strong local networks, but because of the variety of social ties they are also likely to have substantial “weak ties” to other portions of the metropolitan area. This community is capable of political action, is more open to outsiders, and is likely to garner resources effectively from the larger community. It is an outward-looking community form rather than an inward-looking one. The social climate here tolerates differences. Trust in such areas is also higher. In cultures that emphasize individuality and control, this particular set of spatial conditions promotes physical and mental health (Davis 1990).

The final cell of Table 3.1 represents a situation of “detachment” not unlike Wirth’s (1938) description of urbanism. In these areas, the choice of local primary ties is arithmetically constrained, and because of the differences among neighbors, they have little in common. Such places make it difficult to find and sustain local friendships. While these areas

certainly promote individuality and freedom, the degree of personal control over friendships is minimal. Trust is eroded. Such places lack social identity as well as any political control over their future. Identity and control may be further exacerbated by the fact that they also tend to be areas with high rates of transience, further intensifying detachment (Sampson 1988).

Patterns of Socialization

Because spatial circumstances affect the conditions for local interaction, they also shape socialization experiences and thus the cultural climate of residential areas. A variety of research traditions emphasize the role of space in self-development and the acquisition of roles, including: criminology (Bursik 1986; Krivo and Peterson 1996; Sampson and Wilson 1995; Taylor and Covington 1988), deviance (Crane 1991), ethnic assimilation (Lieberson 1961), and status attainment (Crane 1991; Datcher 1982).

In the criminology and deviance literatures, two health-related metaphors are used to explain role acquisition—risk exposure and contagion. Sutherland's classic theory (Sutherland and Cressey 1960) of differential association provides an idealized version of the risk exposure view. Here the likelihood of individual criminal behavior is a function of the local context and the individual's access to a diversity of roles and norms. If individuals are exposed to a predominance of deviant norms and institutions then the individual has a high likelihood of performing deviant acts. The relationship between exposure and the performance of deviant acts, however, is not linear. Crane (1991) suggests that a tipping point exists in the relationship between exposure to deviance and the likelihood of deviant behavior. In this view, a contagion effect exists when a tipping point is reached in deviance exposure, causing the levels of deviance in the area to increase at an exaggerated rate. Crane shows this effect in rates of both teenage pregnancies and high school dropouts.

These views can be set in a broader sociological context. Role theorists argue that the structure and process of human thought are affected by the social context. "Social structures differ in the extent to which they

encourage or discourage . . . the use of intellectual flexibility” (Coser 1975:252). Social contexts characterized by great role diversity stimulate the development of intellectual flexibility and self-direction. If people are exposed to complex social environments, with competing expectations (role articulation), the individual is forced to evaluate and reflect upon appropriate courses of action. This situation promotes innovation (deviation from the local norms and patterns of behavior) rather than conformity. In essence, this is one of the weaknesses of strong ties suggested by Granovetter (1973a and b). In highly segregated, dense settings, peer pressure becomes intense. The communalism of Cell 1, Table 3.1, can have contagion-like effects on the behaviors of its residents. Obviously the social linkages shaped by locale have direct bearing on the behavioral repertoire available to participants. In this sense, the same forces that constrain friendship choices should also channel likely paths of behavior via learned values and norms and available role models (Wilson 1996).

Table 3.2 presents the likely consequences of various spatial contexts for socialization outcomes in neighborhoods and communities. As such, they depict another aspect of the expected relationship between space and social climate. The phrases used to describe various outcomes reflect terms used in Robert Merton’s classic essay on deviance (1968). We assume that, particularly for the young with limited mobility (no access to regular transportation), commitment to a given behavioral pattern will be affected by (1) the diversity of roles and norms present in the neighborhood (degree of segregation); (2) the extent of role models available there (choice density); and (3) the youth’s awareness and exposure to norms and role models outside the local context. Of course, in modern

Table 3.2 The Likely Paths of Behavior in Various Spatial Contexts

<i>Diversity of norms</i>	<i>Choice densities of possible significant others</i>	
	<i>High</i>	<i>Low</i>
Low	Conformity	Ritualism
High	Innovation	Retreat

Source: LaGory 1982:75.

societies, role models and behavioral repertoire are readily available from a variety of extraspatial sources—print media, radio, and television—so that at least awareness and exposure to alternatives may be constant. If there is reasonable consistency of awareness, then local features should play a special role in the development of local subculture for less mobile groups (youth and elders). As youths gain access to transportation this may change somewhat, although the evidence presented earlier on social areas suggests a local effect for all age groups.

The first cell of Table 3.2 portrays a situation of high choice but limited diversity in the range of role models available. This situation, common in inner-city neighborhoods, is likely to produce high levels of conformity to the prevailing local norms. In cases where the neighborhood is riddled with illicit activity and local institutions supporting deviance, young persons learn to conform to deviant expectations. This environment promotes the presence of a pervasive local deviant subculture. Under this spatial circumstance, lifestyle orientations are relatively homogeneous, but the individual is given the illusion of some choice between role models. Here local ties are intense, but role articulation is low (i.e. limited presence of conflicting roles). Thus, both private conformity to neighborhood peer standards and limited individual autonomy are the rule.

The ritualist of Cell 2, on the other hand, may be more capable of independent action because ties are less intimate and more “sociable.” While individuals are likely to experience similarly low levels of role articulation, peer choices are very limited. This situation is likely to encourage public acceptance of local norms, but individuals may be more inclined to seek role models in the public arena (media) or in other areas. In essence, pressures to conform to the local social climate are less significant than in Cell 1.

The last two cells of Table 3.2 describe spatial conditions that afford individuals greater opportunities for autonomy. The choice of role models in the cosmopolitan community is wide ranging, in both number and variety. In this case, role articulation is more plausible and friendships are less spatially confined than in Cell 1. People have connections (weak ties) to other areas. Here the individual is free to be more innovative, and

community tolerance is likely to be higher than in conditions of conformity or ritualism. In this case, people may be encouraged to consider alternative lifestyles, and no single subculture is promoted. The retreatist stance is most likely when role articulation is probable but the choice of available role models is constrained. This condition is potentially alienating because individual freedom is encouraged (via role articulation) but the local area does not offer the array of social networks to exert this independence, a fact which may lead to social disorganization.

Conclusion

Both interior spaces and neighborhood places have the potential to affect individuals' lives in many ways. As we demonstrate in Chapter 4, health is in part a function of human experiences and actions. To understand the experiential and behavioral factors connected to health, we should be aware of the significance of place, taking into account the role that spatial structures play in constraining or expanding the choices people have and the circumstances they are exposed to. As just seen, certain spatially structured conditions (sociocultural diversity, choice densities, levels of transience, and employment opportunities) set the social climate (friendship networks, socialization experiences, and level of violence) for various neighborhoods and thus affect residents' everyday lives. Besides this social climate, there is a physical climate shaped by forces in the global economy and the local metropolitan area which impacts everyday life. Hazards are unequally concentrated, and those with the most limited resources have the greatest exposure to hazard. In the modern high-technology, high-risk society, haves and have-nots are easily distinguished by their levels of risk exposure. This stratification of risks is deeply embedded in the urban landscape. That landscape, in turn, intensifies the risk experience. In the next chapter we show how these spatial structures may also help to shape people's health.

4

THE SOCIOLOGY OF HEALTH

America has the best doctors, the best nurses, the best hospitals, the best medical technology, the best medical breakthrough medicines in the world. There is absolutely no reason we should not have in this country the best health care in the world.

William Frist

If we aren't willing to pay a price for our values, then we should ask ourselves whether we truly believe in them at all.

Barack Obama

The story of Village Creek is not unlike those told in high-poverty neighborhoods across the country that have been threatened by exposure to environmental hazards. Residential toxic exposure is highly disruptive (Downey and Van Willigen 2005; Ellaway and Macintyre 1996, 1998; Greenberg and Schneider 1996; Kawachi and Berkman 2003). The stress experienced by contamination or even the threat of contamination is significant and underscores the importance of understanding health. Beyond the obvious physical health risks, exposed residents often report feelings of anger, frustration, aggression, and depression, and in some cases require hospitalization for mental or emotional illness. Many families experience disruption, financial difficulties, divorce or separation, and extended unemployment as a result of their exposure to hazards

(e.g. Edelstein 2004). The community's social fabric is torn apart by the stress of exposure to hazards. When physical stressors collide with the stressful circumstances of individual and contextual poverty, neighborhood detachment is likely to occur (Kawachi and Berkman 2003; Woldoff 2002). These "detached communities" are more likely to be urban, high density, low income, and predominantly minority. It is estimated that there are over 400 hazardous waste sites in the United States, with 9 million people living within 2 miles of one of them. Over half of those residents are minorities, living in neighborhoods where the poverty rate is 1.5 times higher, and the population density is nearly 30 times greater (Saha 2009).

While the physical impact of environmental disasters on residents in urban areas is well documented (Bullard 1990, 2000; Edelstein 2004), the feeling of helplessness experienced in such disasters is often overlooked. As was the case in the Village Creek incident, residents often report experiencing depression-like symptoms as their home and neighborhood are threatened. In addition to affecting individual health, exposure to hazard challenges the overall well-being and quality of life in the local community. While threats to health are the immediate issue, these threats themselves initiate an extraordinary distress process with long-term implications for residents.

The Healthy Society

Anticipation and worry over threats to physical health are not surprising or necessarily community specific. There is a revitalized interest in health in American society that, in part, has been motivated by an increase in chronic diseases associated with negative health behaviors (Becker and Rosenstock 1989). In addition, the recent convergence of several social phenomena, including the graying of America, technological development leading to increased health risks, health care reform, along with a culture that increasingly promotes self-development, has encouraged Americans to rethink their health behaviors. Expenditure patterns reveal that the U.S. population spends billions of dollars each year on fitness and health-related activities and equipment (U.S. Department of

Commerce 2005). In addition, the health service industry now accounts for over 15 percent of the gross domestic product, with billions spent on health care annually (Organization for Economic Cooperation and Development 2007). Ironically, in the midst of the “health craze” and the boom in health-related spending, general health and health care remain significant social and political problems for the United States (Link 2008). Our population’s health does not reflect the country’s significant and growing expenditures for health care.

This motivated the Obama administration to work with legislators and health professionals to reform health care delivery in the United States. While the consequences of this effort remain uncertain, the intention is clear. Successful reform requires expanding coverage and emphasizing preventive care, while honoring patient choice, reducing inflationary pressures on costs, and holding insurance companies accountable. An effective health care system must offer universal access to basic care. Postmodern capitalism has produced not only great wealth for some, but also dramatic poverty for others. In America’s current free market-driven system, the economically disadvantaged are medically disadvantaged. The quantity and quality of health services are unevenly distributed geographically, and there are clear-cut disadvantages for those living in inner cities where poverty and minority status combine and are concentrated (Collins and Schulte 2003; Wright and Fisher 2003).

Besides structural barriers to good health, the quest to become the “healthy society” often has been overshadowed by lifestyles that promote health-compromising and risk-taking behaviors. Health-compromising lifestyles continue to challenge health care professionals as they struggle to find new ways to modify old behaviors. America’s comparatively poor health appears to be due in part to such risk-taking behaviors as smoking, drinking, drug use, poor eating habits, sedentary lifestyles, and risky sexual practices, among others (American Heart Association 2009; Colditz et al. 1996; Goldstein 1992). Although health-related behaviors are important for health outcomes, this individualized perspective overemphasizes genetics and behavior while ignoring the critical role that social structure plays in determining health care access, as well as physical and

mental well-being (Link 2008; Wilkinson 1996). For example, obesity is a major contributing factor to the poor health of Americans. Obesity is linked in complex ways to social structure. The highest rates of obesity ironically occur in states with the lowest median income and education, and the highest rates of physical inactivity (Drewnowski and Specter 2004). Poverty encourages poor diets. Healthier foods are less available in poor neighborhoods because such foods are often considerably more expensive, and low-cost foods are higher in sugars and fats and frequently more palatable than healthier, more expensive foods (Drewnowski and Specter 2004). In effect cheap foods are often preferred because of taste and cost per calorie, even when their long-term costs to health are considerable.

It is essential to understand the complicated relationship between health, social structure, and social behavior. Attempts to disentangle that relationship have been ongoing since Hippocrates. In *On Airs, Waters, and Places*, he noted that well-being was influenced by the intersection of social and environmental factors including climate, topography, quality of natural resources, and living habits and lifestyle. Since this first “ecological” examination, scientists have struggled with identifying specific social and behavioral causes for disease.

Rooted in eighteenth-century Western European thought, modern medical practice emerged with two distinctive orientations: a “medicine of the species” and a “medicine of social spaces” (Cockerham 2009; Foucault 1973). The medicine of social spaces represented the precursor to modern-day preventive medicine. It was based on the simple notion that if a person’s daily activities were regulated, health and health behaviors could be positively affected. This critical assumption represents the basis for the modern public health approach, which assumes that health and behavior are intimately connected and that improvements in health require changing people’s behavior patterns. There are numerous contemporary examples (AIDS, heart disease, tuberculosis, cancer, cirrhosis, depression, anxiety, post-traumatic stress disorder) that illustrate how certain behaviors, conditioned by structural circumstances, can negatively impact an individual’s physical and mental health. One of those structural circumstances is residence.

Place of residence influences an individual's mental and physical well-being and is a critical sociological variable affecting health. That relationship is central to this chapter and this book. In the last decade, research examining the link between place and health has grown exponentially, with convincing results (Corburn 2009; Kawachi 2002; Macintyre et al. 2005; Mirowsky and Ross 2003; Ross and Mirowsky 2001). In an attempt to explore this relationship we examine five theories that address the relationship between social structure, behavior, and health: health beliefs, healthy lifestyles, risk and protective factors, psychosocial resources, and neighborhood disadvantage/disorder. We then show how they can be used to develop a comprehensive place-based theory of health. To accomplish this, the ecological theory discussed in Chapter 3 is employed to explore the links between ecological characteristics, health-related aspects of social structure and behavior, and the health of urban populations.

Health Beliefs

The first of the major social science theories of health is the health beliefs model (Becker 1974; Rosenstock 1966, 1990). This theory uses attitudes to explain why certain individuals engage in health-protective behaviors while others do not. It rests on the assumption that individuals take disease-preventive action when their behavior can lead to a valued outcome, and they believe that the desirable outcome is achievable. In an attempt to explain health-related behavior, the theory shows how disease-prevention behaviors occur when four conditions are present. First, individuals must believe (susceptibility) that there is some threat (disease or condition) to their health. Second, they also must believe that contracting a particular disease or developing a particular condition will have serious consequences. Third, they must assume that taking certain actions can reduce their susceptibility to the disease or the seriousness of the condition. Fourth, modifying factors exist (demographics, psychosocial factors, media campaigns, advice from professionals and friends, etc.) that can influence a person's perception of the disease's threat and the likelihood that she will take preventive action (Becker 1974).

In short, the theory suggests that individual perceptions can be modified to increase chances that persons take a recommended preventive action to improve or maintain their health. The modifying influence of television and radio, reminders from physicians, newspaper or magazine articles, prior knowledge or contact with a particular disease, and peer pressure can work in combination to mediate the negative expectation of individuals and their perception of disease threat. The model assumes that elements of a person's belief system can be changed in order to ensure a successful treatment or prevention outcome (Becker 1974).

Over the last several decades, the health beliefs model has been used with some success in explaining health-preventive behavior. Applications of the theory have included AIDS prevention (Brown et al. 1991; Connor and Norman 1996; Montgomery et al. 1989), dengue health education (Lennon 2005), and seat belt use (Nelson and Moffit 1988). Most studies indicate that the model's real merit is in identifying the role that a person's subjective health assessment plays in the decision to seek health services. Indeed, research shows that an individual's opinions about his or her health are often a better predictor than an actual medical diagnosis as to whether individuals will seek treatment for a disease or condition. While not without criticism, this micro approach demonstrates the role of attitudes and beliefs in determining health-related behaviors. It suggests that a macro-level theory of health requires acknowledgment of the subculture's function in shaping the health of various populations.

Criticism of the theory centers on the questionable ability of attitudes and perceptions to predict health behavior. Do perceptions actually cause behaviors, or do circumstances that are either out of the individual's control or impossible to measure make the difference? Attitude-behavior approaches are often critiqued for over-rationalizing human behavior. Some argue that attitudes merely offer individuals an opportunity to provide after-the-fact explanations for personal habits that involve little rationale or calculation. In addition, critics argue that the model is difficult to quantify. Perhaps the more serious criticism, however, is that this model accounts for behavior simply by relying on attitudes and beliefs, to

the exclusion of important structural and environmental factors (Bernard and Krupat 1994).

Health Lifestyles

A more recent approach to health behavior is the health lifestyles model. Lifestyles are ways of life involving preferences in food, fashion, appearance, housing, work patterns, leisure, and other forms of behavior that differentiate people. Health lifestyles are defined as collective patterns of health-related behavior based on the choices made available to people according to their life chances (Cockerham 2007; Cockerham and Ritchey 1997). Health lifestyles include nutrition and eating habits, drinking, smoking, exercise, personal hygiene, coping patterns, and other health-related patterns of behavior. Cockerham (1999) demonstrates the critical role that lifestyles play in health, showing how the widespread decline in health in former Eastern Bloc socialist countries can be attributed to lifestyle patterns.

Life chances include age, gender, race, ethnicity, and socioeconomic position. Life chances shape the choices available to people; socioeconomic standing affects the individual's ability to realize these choices. In this perspective, while people generally engage in some form of health-advancing behavior, socioeconomic position helps to determine their capacity to pursue and obtain specific health outcomes.

This model is grounded in the earlier work of Max Weber, who first proposed the idea of lifestyles in his discussion of status groups in *Economy and Society* ([1922] 1978). Weber links lifestyle to status by suggesting that the characteristics of status can be expressed in the particular lifestyles that a person chooses. Knowing that lifestyles are part of a consumption process, Weber argues that lifestyle differences between status groups are a function of their relationship to the means of consumption, rather than the means of production (Cockerham et al. 1997). Thus, consumption of goods and services is a way that social differences are expressed and actually established between status groups. So, for example, a person using a health spa at an exclusive resort is a consumer with a status and social identity clearly different from

someone who cannot afford that type of health-improving activity, or someone who can but chooses other activities.

Weber views life choices (*Lebensführung*) and life chances (*Lebenschancen*) as components of a person's lifestyle (*Lebensstil*) (Abel and Cockerham 1993; Cockerham et al. 1993). Life choices reflect the preferences individuals make regarding lifestyle, which are intimately related to an individual's life chances. Life chances refer to the likelihood of achieving a particular lifestyle, based on past experiences, social status and power, and social networks. Thus, one's life chances are clearly constrained by social, political, and economic circumstances, which, in turn, affect life choices. In essence, the Weberian approach describes interplay between structure and choice, providing further elaboration of the health beliefs model.

While this model has great potential for contributing to a better understanding of health behaviors, a critical question raised by medical sociologists is: How does Weber's lifestyles concept translate into a healthy lifestyles framework? The work of Bourdieu (1984, 1990) bears directly on the contemporary version of the healthy lifestyles model. Bourdieu notes that while individuals choose their lifestyles, they do not do so freely. Rather, their *habitus* (a collection of objective social and economic conditions) predisposes them to make certain choices (Cockerham et al. 1997; Munch 1988). It provides an individual with a cognitive map of his or her social world, as well as behaviors appropriate for particular situations. Bourdieu (1990) contends that the human mind is socially bounded and limited by socialization, life experiences, and training. While most individuals understand their social circumstances, their perceptions are typically bounded by a social and economic reality. Habitus encourages development of a pattern of behavior and mind-set that appears reasonable to the individual, given their social and economic circumstances. Thus, what emerges is a lifestyle pattern, including a system of varying tastes (dress, food, and other forms of entertainment, including health and fitness) nested in a particular status group. Hence, social standing predisposes specific aspects of lifestyle, which may include eating, exercising, attitudes toward prevention, physical appearance, and a variety of risk-taking behaviors.

This relationship becomes most apparent when examining differences in health-improving behaviors between status groups. Martha Balshem (1991) illustrates the link between social status and lifestyle in a study of a working-class neighborhood where a public health program to reduce cancer risk failed. In this neighborhood, most residents believed that they could do nothing to improve their chances of preventing cancer, and so lifestyle changes were deemed futile. This finding supports Bourdieu's (1990) claim that due to habitus the usual ways of behaving prevail, and extraordinary changes in behavior are unlikely to occur (Cockerham et al. 1997).

While good health is a commonly held goal, people make a variety of choices affecting lifestyle patterns and health. Such choices usually occur for very practical reasons such as not wanting to contract specific diseases, desiring to live longer, wanting to look and feel good, or aging gracefully. In most Western cultures, a good deal of emphasis is placed on the role of life choices in effecting good health. Even as health care becomes more structured, a menu of options bombards the health consumer as they attempt to make decisions regarding who, how, when, and where they are cared for. With this overemphasis on choice, the relationship between chances and choices is often ignored. What predetermined factors influence choices? How does place affect choices? Is place a critical aspect of habitus?

Research continues to demonstrate the link between life chances and choices and their role in effecting health outcomes. Though socioeconomic status is important, it is not the only life-chance factor influencing health. In fact, certain health behaviors such as diet, exercise, smoking, and drinking patterns have been shown to be characteristic of particular groups of persons irrespective of their social standing (e.g. George and Johnson 2001; Grzywacz and Marks 2001). Beyond class, factors such as gender, residential location, and age also influence health behaviors. Researchers note that when controlling for socioeconomic status, men generally engage in more health-compromising behaviors than women (Cockerham 2005, 2007). The social area approach, reviewed previously in Chapter 3, suggests that places vary in lifestyle. The research generated from this perspective indicates that a place's social climate,

independent of the individual's gender, age, and socioeconomic status, will affect the individual's style of life. No research has directly explored the impact of the social area on health behaviors. Research has been done, however, on age's implications for health lifestyles. Aging persons take better care of themselves—watching what they eat, taking more time to relax, and reducing their intake of alcohol and tobacco (Cockerham et al. 1988; Lueschen et al. 1995). The one exception is exercise, which declines with age, creating a major lifestyle change with the potential for significant impact on health (Grzywacz and Marks 2001).

Aspects of the healthy lifestyle viewpoint have been incorporated into the very consciousness of mainstream society. An overwhelming desire to look good and live longer and a conviction that these desires can be accomplished through wellness programs, exercise centers, and commercial products dominate a middle-class way of thinking that may be helping to set the health agenda in the twenty-first century. Unfortunately, this viewpoint often glosses over the critical role life chances play in determining lifestyles, creating the impression of a dialectic between life chances and choices rather than a causal or interactive process.

Risk and Protective Factors

A third framework, originally designed to explain health-compromising behaviors (drug and alcohol use) among youth, is the risk and protective factors model. Instead of conceptualizing health behavior as a function of both socially determined chances and individual choices, this distinctively public health approach concentrates on the factors promoting or discouraging health-compromising behaviors. These factors are seen as complex, multilevel forces operating at both individual and contextual levels.

The salience of certain risk and protective factors varies across individuals, families, schools, and communities. Thus, a multilevel prevention approach becomes critical to developing effective strategies for reducing health-compromising behavior. This systems approach to understanding health-compromising behaviors among youth is compatible with

Bronfenbrenner's ecological theory (1979, 1986). Here, a child's development is strongly influenced by family, schools, peers, and neighborhood, which, as the main "spheres of influence," act as interdependent, nested parts or systems. Each system contains an "organized collection of activities and resources that exists within definable social and physical boundaries" (Berger et al. 1996), and each one exerts its own influence on the individual. This systems approach to development recognizes both the child's capacities to change, as well as the social environment's power to induce such change. While genetic code is important in determining cognitive, social, and psychological outcomes, the social ecology of a community creates a powerful context of influence, significantly affecting the path of development (Bronfenbrenner 1986; Garbarino et al. 1992). These ever-widening "spheres of influence" are precisely why the risk and protective factors perspective is important for developing a place-based approach to health.

The general model proposes that the relationship between risk and health-compromising behaviors is buffered or mediated by protective factors. While the specifics of the risk and protective factors model have gone through significant theoretical revisions, the general perspective has produced a great deal of research over the past 30 years. This research has allowed generalizations to be made regarding the role of risk and protection in understanding negative health outcomes (Dekovic 1999; Fitzpatrick 1997; Fitzpatrick et al. 2008; Fitzpatrick et al. 2009; Piko and Fitzpatrick 2003; Piko et al. 2005; Sameroff et al. 1993; Stevens 2006). These generalizations include the following:

1. Risk factors exist in multiple domains. Risk occurs at various levels in the individual's environment—the family, school, social networks, and neighborhood.
2. The more risk factors present in the environment, the greater the risk and the greater the likelihood that a negative health outcome will result. Many persons are at risk for negative health outcomes. Some, however, are exposed to such a large number that their "risk quotient" is exponentially greater than others. For example, all children living in poverty are at risk for poor negative health outcomes simply

because they are poor, yet not all of these children follow similar health trajectories. If a child lives in poverty, has a low IQ, lives with a single parent, has no health insurance, has low self-esteem, and is constantly exposed to community violence, that child's risk quotient is significantly greater than for a child who lives in poverty without any other risk factors present.

3. Common risk factors predict a diverse set of health outcomes. This finding suggests that when certain risk factors are identified and interventions prove successful, additional benefits may accrue. Thus, for example, a program that successfully reduces violence exposure and improves mental and physical health may also reduce feelings of vulnerability, while increasing school performance and social competence.
4. The effects of risk factors show some consistency across race, ethnicity, and social class. Thus, while risk varies from group to group, the effects of risk do not, suggesting that community prevention efforts targeting specific risk factors should be adaptable to a variety of sub-populations.
5. Protective factors may buffer the negative effects of exposure to risk. Research has demonstrated that certain protective factors moderate the negative consequences of exposure to risk, improving health outcomes. Protective factors are both passive and active; some actually reduce risk simply by their presence, while others change the way a person responds to risk. Armed with knowledge about these multi-level protective factors, communities can develop programs that more effectively minimize or eliminate risk.
6. As is the case with risk factors, protective factors occur at multiple levels. Individual, family, school, and community-level characteristics are important in helping individuals establish a "blanket of protection." Protective factors include individual characteristics such as gender, IQ, and temperament; family and school characteristics such as bonding with parents and teachers, parental supervision and interest in child's activities; and community characteristics such as healthy beliefs and well-defined standards in a community that provides support and access to resources.

The risk and protective factors framework has been particularly useful in developing comprehensive prevention programs for spatially concentrated health problems. Developing and implementing strategies that comprehensively attend to the multidimensional physical and mental health needs of children and families is a formidable task. Unfortunately, most of the efforts have concentrated on treating the illness rather than dealing with the risks associated with the illness, such as place of residence, and the socioeconomic and general life circumstances of the individual.

As suggested, a risk-based approach to prevention can be used as a comprehensive strategy to address the health problems emerging in a diverse society with significant demographic differences in morbidity and mortality. Following theories of health discussed earlier in this chapter, health lifestyles and beliefs should be included in this framework as aspects of risk and protection targeted for the prevention of health-compromising behavior.

Psychosocial Resources

Another framework used to explain health behavior is the psychosocial resources model, a model that originated from the earlier work of stress researchers (Dohrenwend and Dohrenwend 1981; Holmes and Rahe 1967; Tausig 1986a and b; Thoits 1985). The model attempts to understand the intricate relationships among stressors, social and psychological resources, and the individual's mental health (Cobb 1976; Dean and Lin 1977; Ensel and Lin 1991; Lazarus and Folkman 1984; Lin et al. 1986; Mirowsky and Ross 1989; Pearlin 1989; Turner 1983; Turner et al. 1995; Wheaton 1983).

Stressors refer to environmental, social, or individual circumstances that give rise to stress, force people to adjust or readjust their behavior, and eventually influence the mental and/or the physical health of the individual (Thoits 1995). Pearlin (1989) suggests that two major types of stressors should be considered: *life events* and *chronic strains*. Life events are undesired, unscheduled, and uncontrollable acute events in a person's life, such as divorce, death, loss of a job, or in the case of Village Creek, an environmental accident. Extensive empirical research has shown that

one or more negative events experienced in a year can have a negative impact on a person's mental health (Cohen and Williamson 1991; Tausig 1986a and b; Thoits 1983).

Chronic strains, on the other hand, are more enduring problems faced on a daily or ongoing basis. These circumstances, like life events, also have negative effects on physical and mental health (Avison and Turner 1988; Pearlin 1989; Verbrugge 1989). Chronic strains have been linked to the social roles and places that are byproducts of the stratification system. Thus, gender, race/ethnicity, and class become particularly relevant to a discussion of the association between social position and individual health outcomes (Mirowsky and Ross 1989; Pearlin 1989).

Perhaps the most obvious example of the link between social position and health is that of income inequality (Lundberg 1993; Wilkinson 1996). Poverty represents a chronic strain with significant consequences for health. Both absolute and relative deprivation cause stress; empirical evidence shows that adverse socioeconomic circumstances have the potential for long-lasting psychological and emotional damage, particularly for children living in high-stress environments (Bolland 2003). General comparisons with children not living in poverty indicate that at-risk youth are more likely to fail in school, have disciplinary problems, have low achievement scores, repeat grades, drop out of school, exhibit delinquent behavior, and experience long periods of unemployment. These same youth are also likely to encounter significant physical and mental health problems.

To further illustrate the important role that socioeconomic disadvantage plays in determining health outcomes, Wilkinson (1996), using cross-national data, demonstrates that at similar levels of development, nations with greater income inequality generally have populations with poorer overall health. Hence, in those countries where inequality is modest and social cohesiveness high, life expectancy is higher. Among developed countries, it is not the wealthiest societies that have the best health, rather the most egalitarian do. Societies with a narrower gap between rich and poor have a stronger community life, less family dissension, and higher levels of formal and informal social support. These resources, in turn, play an important role in promoting health.

In general, researchers conclude that these types of resources intervene in the stress process. Resources modify or at least mediate negative conditions (life events or chronic strains such as poverty) that may lead to the development of mental health problems. Thus, they are conceptualized as reactive elements in the stress process, which are drawn upon as either mediators or buffers against negative external stimuli (Ensel and Lin 1991).

Two major types of resources are considered critical to understanding the overall stress reduction process. *Psychological resources* are personality characteristics that enable individuals to cope with challenging circumstances. Traits such as mastery (Pearlin and Schooler 1978), self-esteem (Rosenberg 1965), and social competence (Cairns and Cairns 1994) are resources capable of moderating life stressors. *Social resources* are the resources embedded within a person's social networks that serve specific instrumental and expressive needs. One way of thinking of these networks is to see them as *social supports* that persons in distress rely upon, including family, friends, and neighbors. These supports are critical to an individual's ability to cope with challenging, undesirable circumstances and events.

In describing the various aspects and sources of support, Lin and colleagues (1986) point to the "perceived or actual instrumental and/or expressive provisions supplied by the community, social networks, and confiding partners" (p. 18). There are several noteworthy aspects to this particular definition. One is a clear distinction between actual and perceived support. Both types of support have received a great deal of attention in the literature, and in a majority of research; both perceived and actual supports have been shown to reduce the negative consequences of stressors on an individual's mental health (Lin et al. 1986; Thoits 1995). The definition also highlights the multiple sources of social support for individuals. These include the characteristics of an individual's formal and informal networks, as well as the nature of the community in which those networks are embedded.

Considerable empirical evidence shows that social support at all these levels plays an important role in the stress process (see Thoits 1995 for a comprehensive review of social stress research and its major findings);

the exact nature of this relationship has been a subject of some debate (Ensel and Lin 1991). The suggested roles that resources play include deterrence and coping. Models proposing deterrence show resources directly reducing distress. Coping models, on the other hand, argue that stressors trigger a response from the individual's social resources that, in turn, have some impact on distress. Additionally, they point out that resources generally intervene in the relationship between stressors (events and circumstances) and levels of distress. Social science research most strongly supports the coping perspective (Ensel and Lin 1991; Thoits 1995). This perspective is also compatible with ideas contained in the risk and protective factors approach. Both models propose that social resources act as protection against the risks contained in a stress-filled environment.

But social ties are more than simply a coping mechanism or a vehicle for protection. They are assets that individuals can draw on both to get by as well as get ahead (Putnam 2000; Irwin et al. 2008; LaGory 2009). They are a form of capital as valuable to the well-being of individuals and communities as their financial assets, their education and training. Like financial capital and human capital, *social capital* is a resource that can be used not just to alleviate distress, but to actually promote health and well-being.

Just like financial and human capital, in order for them to be beneficial they must be spent from time to time. At a personal level such ties offer access to information, opportunities, and resources available only to the friends and acquaintances in those networks. With a little effort they can help the individual solve a range of personal challenges from finding work or a loan, to getting help when they are sick. The community can benefit from social capital as well. A multiplier effect is realized when groups share their talents and resources. Partnerships have the potential of being stronger, more resilient, and more creative than their partners.

Social capital benefits individuals and groups in two ways. It *bonds* similar individuals together, producing "strong ties" between them. A strongly bonded group offers entrée to a community of persons with similar characteristics, influence, and resources. On the other hand, social ties *bridge* or link differing groups of people, unlocking a wider array of

resources and a wider span of influence. Bonding social capital allows people with limited resources to maintain their current circumstances and lifestyles better than they might on their own; a protective function (Putnam 2000). Bridging social capital, on the other hand, allows these same people to achieve a better life by providing admission into groups with a greater variety of resources and power. These ties are sometimes referred to as “weak ties” because they extend beyond the immediate support system of family and friends and include the individual’s larger acquaintance structure. Weak ties can help people and communities overcome structural barriers to advancement. One critical problem, however, is that high-poverty ghettos, because of significant segregation, tend to have little bridging social capital, leading to circumstances in which residents have few social resources to overcome the structural disadvantages of poverty (Mitchell and LaGory 2002).

Neighborhood Disadvantage and the Ecology of Health

Ecological factors constrain the choices and actions of individuals in neighborhoods, and these actions and choices affect the health of residents and their communities. In addition, the ecology of a metropolitan area can directly affect health because of the differential risks distributed across the urban landscape. The nature of the relationship between ecology and health is obviously complex, involving more than just the physical and psychological risks inherent in a place. The ecology of an area has an impact on the health beliefs and practices of residents, their health lifestyles, their access to various health resources, and the social network of friends and supports that help people cope with stressful circumstances and events. Certain ecological conditions can intensify the health disadvantages of some groups, promoting the emergence of unhealthy lifestyles mired in risky and dangerous behaviors. They can concentrate persons with already limited options into areas that, because of their ecology, further restrict the lifestyle options, social supports, and health resources available to them. There are clearly unhealthy places.

Risk and life chances are spatially structured in the urban landscape. Because housing is delivered in the marketplace, residential location is a

function of a group's ability to pay for housing and transportation, as well as their ability to gain advantage and control over the market. Hence, the urban space is home to a mosaic of groups sorted and sifted according to their political and economic resources (life chances). Those with greatest resources generally reside in areas containing low levels of risk, while those with limited resources find access restricted to undesirable areas with the greatest amount of risk. Thus, the ecology of risk follows fairly straightforward patterns in which people are segregated according to their abilities to gain housing. Risk, in other words, typically is segregated by those factors associated with life chances (race/ethnicity and class). Communities with the greatest concentration of risk contain large numbers of minorities and low-income persons living in aging residential areas—the low-resource populations and places of the high-poverty ghetto (Logan and Molotch 1987). These also happen to be groups whose lifestyle choices are constrained by their life chances or habitus.

The final health model included in this review of health theories, *neighborhood disadvantage*, examines these ecological aspects of health by exploring the role of neighborhood poverty in determining health and well-being (Cohen et al. 2003; Hill et al. 2005; Latkin and Curry 2003; Mirowsky and Ross 2003; Ross and Mirowsky 2001; Sampson et al. 2002). Neighborhood disadvantage theory offers a road map for a place-based approach to health, and has its roots in Wilson and Kelling's (1982) "broken-window" hypothesis. The urban disadvantage theory examines the complex interplay between neighborhood disadvantages (poverty, minority residents), personal disadvantages (low socioeconomic status, unemployment, low education), and neighborhood disorder (vacant housing, limited social capital), and these factors' impact on residents' physical and mental health (Browning and Cagney 2003; Ross and Mirowsky 2001; Sampson 2003; Sampson et al. 2002). Negative neighborhood conditions promote social disorder. Whether incivility or crime, fewer jobs or opportunities for success, residential disadvantage weakens the social fabric of places, creating an environment of fear, anxiety, depression, hopelessness, and poor physical health (e.g. Mirowsky and Ross 2003).

Perhaps no better example of this is Eric Klinenberg's (2002) study of heat-related deaths in Chicago during the unusually long and severe heat wave of 1995. In six days, 740 people died from heat-related causes (twice as many as during the Great Chicago Fire of 1871). The incident was more than a natural disaster, according to Klinenberg, it was "a catalogue of urban horrors" and a "biological reflection of social fault lines." While many elderly died, this wasn't just a manifestation of age-related health risks, but the lethal combination of a concentration of elderly living in socially isolated, deteriorating neighborhoods with limited social capital/support and declining commercial activity (Browning et al. 2006).

This incident is far from unusual—neighborhood conditions shape health outcomes across all age, gender, class, and racial groups. While separating individual from place effects is difficult, studies continue to show that neighborhoods with concentrated poverty and minorities, poor housing stock, and social disorder have poorer health outcomes (e.g. Baumer and South 2001; Elliot 2000; Ross 2000; Sampson et al. 2002). These places lack the resources necessary to promote good health and healthy lifestyles. High-poverty ghettos cannot keep or attract the supermarket chains or drugstores that offer healthy foods or the bare medical necessities to sustain a healthy way of life. The absence of health-promoting places such as parks, doctor and dentist offices, drugstores or chain grocery stores is complemented only by the prevalence of liquor stores, pawn shops, pay-day loan offices, and drug dealers.

In such places social capital is also limited, and even when it exists, it often functions in unhealthy ways. In neighborhoods where everyone is poor, bonding social capital may actually operate as an obligation network rather than a support system, where well-connected people are more frequently tapped for help, than provided support (Mitchell and LaGory 2002). In addition, since disadvantaged communities are also highly segregated places, their residents tend to lack the bridging capital that ties people to diverse resources. This makes it difficult for residents to escape the poverty dominating their personal lives and the lives of neighbors living around them.

These are places where trust is a scarce commodity. Those living and those coming into the community often cannot be trusted. Such places

lack *collective efficacy*, defined as “the willingness and ability to intervene on behalf of the common good” (Sampson et al. 1997). They are unable to respond effectively to threats from inside and outside the community. In such places, crime accelerates and fear grows, keeping residents from using sidewalks and parks for physical exercise.

If, on the other hand, people feel strongly attached to a place and trust their neighbors, they are more likely to function territorially, and collective efficacy will be high. Collective efficacy may be exhibited in behaviors ranging from increased maintenance of their surroundings to assisting their neighbors. Territorial functioning spills over into strong neighborhood ties. In communities where the neighborhood becomes a central behavioral space, community ties strengthen and the area becomes more capable of defending itself against outside threats. Certain ecological conditions promote or reduce territorial functioning. These include spatial conditions that make neighborhoods defensible, such as opportunities for residential surveillance; attractive exteriors; real barriers that separate the residential area into manageable sectors; the absence of “spatial incivilities” such as litter, dilapidation, and graffiti; and the presence of shrubs, trees, and gardens (Perkins et al. 1996).

Disadvantaged neighborhoods with limited collective efficacy, on the other hand, are places where access to health-promoting resources are limited. The poor diets of disadvantaged residents, due to limited access to healthy foods and the costs of these foods, couple with the lack of exercise to promote obesity. Obesity is linked to an urban ecology that concentrates poverty and hazards, limits trust, and promotes unhealthy lifestyles (Drewnowski 2004). It is almost as if some communities were designed to make people sick. Not surprisingly, this link between neighborhood conditions and residents’ health seems true for cities throughout the world (Cummins and Macintyre 2006; Macintyre et al. 2002, 2005; Mirowsky and Ross 2003), and for a range of U.S. cities (Boston, Chicago, New York, San Antonio, Birmingham, St. Louis, Raleigh, New Haven, Los Angeles, etc.) where researchers consistently find that high-poverty ghetto residents are at greater risk of experiencing physical and mental health problems than those living in other parts of the

metropolis (Cockerham 2007; Kubzansky et al. 2005; Laraia et al. 2006; Sampson et al. 2008).

Another factor at work in the link between urban ecology and health is *health-related subcultures* (LaGory 1983). Disadvantaged neighborhoods characterized by residents with limited life chances and high levels of segregation have spatial structures that encourage the development of subcultures. Individuals in such areas develop significant bonding social capital but have few links outside the social area—creating what Fischer (1976, 1982) describes as a “critical mass” for subculture formation. For a subculture to emerge, certain minimal numbers are necessary to support the institutions that give the group a unique identity. Individuals learn cultural norms and values from role models. If the number of role models is high, but their social diversity low, then a situation of high conformity to the local subculture is likely. This conformity will be further intensified if people in the community also have limited resources to seek contacts outside the area, a condition occurring in inner-city areas where transportation is limited by low income and high rates of unemployment. Under these circumstances of limited life chances and highly concentrated social networks, conformity to the norms and values of the local area and limited individual autonomy will be the rule.

The degree to which the subculture deviates from the traditional culture will depend partially on how isolated the local group is, how big it is, as well as whether or not the resources and institutions in the community promote traditional values and norms. Whether risky behaviors become part of the local subculture will depend on the presence of “illegitimate institutions” and “deviant role models” (Cloward and Ohlin 1960). These institutions and models are most likely to emerge in places where the dominant culture’s goals (such as achievement, material acquisition, etc.) are difficult for the local group to attain—a situation most common in areas with limited life chances (Merton 1968). These ecological circumstances (high density, high segregation, low access to health-promoting resources, presence of illegitimate institutions, presence of deviant role models) represent the spatial conditions that nurture high probabilities of health-compromising behaviors and health beliefs. This health-compromising subculture will further exacerbate the high risks

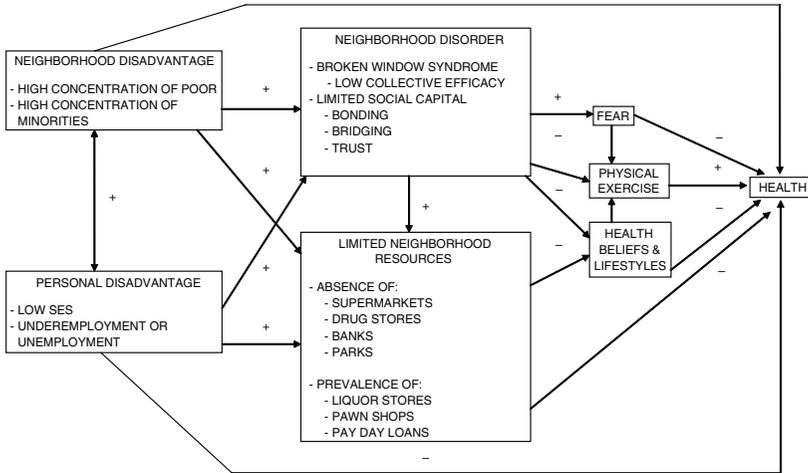


Figure 4.1 A synthetic model of the role of place on health

concentrated in such communities. Hence, local ecology often promotes a mosaic of distinct health challenges, combining unique subcultures with high amounts of hazard and risk, reduced social capital and collective efficacy, and limited health-promoting resources. The most obvious and discussed of these subcultures are high-poverty ghetto areas where the “urban health penalty” is the highest.

The urban disadvantage theory is currently the most effective way to organize and describe the ecological forces contributing to health and disease. Figure 4.1 summarizes this perspective on health and underscores the health disadvantages attached to living in high-poverty ghetto areas.

Conclusion

Until recently social science theories have not adequately integrated place into an understanding of the social forces that impinge on the general health and well-being of individuals and populations. A review of the five social theories of health provides a necessary backdrop for integrating basic ecological concepts into a more comprehensive approach to health and health behavior. This approach is particularly relevant to

understanding the etiology and dynamics of the “urban health penalty.” Certain neighborhoods within the United States clearly have distinct spatial qualities that shape residents’ health risks, health beliefs, and behaviors, as well as the formal and informal networks of protection and support. Identifying these ecological characteristics is an essential first step to developing comprehensive programs that minimize or eliminate the urban health penalty. The value of this spatial approach derives not only from the ability to identify critical, yet often underexplored aspects of health, but also from the fact that spatial structures are more easily manipulated than social structures. Thus ecology of health becomes both a useful and an essential ingredient in a comprehensive health policy attending to the extraordinary needs of the high-poverty ghetto and its residents.

5

CITIES AS MOSAICS OF RISK AND PROTECTION

City life is millions of people being lonesome together.

Ralph Waldo Emerson

When you look at a city, it is like reading the hopes, aspirations and pride of everyone who built it.

Hugh Newell Jacobsen

As noted in Chapter 3, inner-city neighborhoods have undergone dramatic transformation in the last several decades (Massey and Denton 1993; Sampson and Wilson 2005; Wilson 1996; Wilson and Taub 2007). The concentration of poverty and the segregation of neighborhoods by race and class are powerful forces in the reshaping of metropolitan areas and their principal cities. Poverty-stricken neighborhoods have become an all too common feature of the modern metropolis; by the twenty-first century nearly 3.5 million people were living in census tracts where at least 40 percent of residents had poverty-level incomes (U.S. Department of Housing and Urban Development 2003). These same neighborhoods tended to be racially stratified, with the average Black family, for example, living in census tracts where 30 percent of residents were poor. While the percentages vary for different racial and ethnic groups, there is a shared reality—nearly 90 percent of all residents in poor neighborhoods are members of a racial or ethnic minority.

With this high concentration of minority persons, underclass neighborhoods have become characteristic of the inner city and aging suburbs. These neighborhoods typically have relatively high average values on several poverty indicators: (1) working-age males without jobs; (2) households headed by women with children; (3) households receiving welfare; and (4) dropouts among the school-age population (Jargowsky and Park 2009; Kawachi and Berkman 2003; Ricketts and Mincy 1990). The multidimensional character of poor neighborhoods implies potentially profound effects on the health and well-being of residents (Evans 2004; Fauth et al. 2007; LeClere et al. 1997, 1998; Rabito et al. 2003; Riva et al. 2007; Sims et al. 2007). With their youngest residents at greatest risk, inner-city communities have experienced a steady increase in the number of parents and young children living in poverty, an escalation in the number of female-headed households, expanding unemployment, growing welfare dependency, and a continual battle with rising crime and rampant drug abuse (Bolland 2003; Evans 2004; Hanson and Chen 2007; Wilson 1996; Winslow and Shaw 2007).

The present chapter focuses specifically on the unevenly distributed hazards and risks confronting residents of high-poverty ghettos, as well as the layers of protection available to assist them in mediating the negative impact of these risks. As discussed in Chapter 1, hazards represent the circumstances and physical conditions that can produce harm in a population. On the other hand, risks represent the probability that certain individuals or groups will be harmed in their environment. Both hazard and risk are differentially distributed across neighborhoods in principal cities (formerly referred to as central cities), suggesting that levels of harm have a spatial component. The role that space plays in affecting exposure to hazards and risks is complicated by the fact that place is socially and culturally structured. Hence, the roles of salient social identities such as age, race, ethnicity, and socioeconomic status are confounded by hazards and risks inherent in certain places.

Uncertainty is characteristic of life in the high-poverty ghetto. Understanding this uncertainty, its effects on health and well-being, and the availability of services and programs designed to protect persons from

the consequences of this pervasive uncertainty is critical to addressing the health–place relationship.

Physical Hazards and Risks in the Residential Environment

There is a growing recognition that disadvantaged populations are disproportionately exposed to a wide range of environmental health hazards threatening their general physical health and well-being (American Heart Association 2009; Cohen et al. 2003; Downey and Van Willigen 2005; Kawachi and Berkman 2003). Minority populations, particularly African American and Hispanic, are at risk for exposure to high levels of environmental contaminants not because of inherent genetic characteristics or behavioral patterns, but rather because of the places where they live and work. More so than other racial or ethnic groups, they disproportionately live in areas that are non-compliant with national air-quality standards. For example, an estimated 27 million children under the age of 13, and nearly 2 million children with asthma were living in areas that did not meet current national ozone standards; almost 70 percent of those children were either African American or Hispanic (American Lung Association 2009; Mortimer et al. 2002; Peters et al. 1999).

Of course the problem is not limited to air quality. When considering other forms of pollution (water, noise, toxic and hazardous waste), the statistical and practical realities are similar—socioeconomic conditions coupled with race appear to be major factors in determining exposure to multiple environmental hazards (Do et al. 2008; Pickett and Pearl 2001; Robert 1999; Schulz et al. 2002; Williams 1996). Many of these environmental hazards are directly related to population density, which is of course at its highest levels in the nation’s urban centers: More than 83 percent of the U.S. population now live in 283 census-designated metropolitan areas and nearly one-third (32.3 percent) live in the principal city component of these major metropolitan areas (U.S. Office of Management and Budget 2007).

Health-related problems tied to a variety of pollution forms are particularly problematic for persons living in principal city neighborhoods. Toxic waste dumping, water pollution, and runoff are examples of

hazards with significant physical and mental health consequences, particularly for the disadvantaged and underserved subpopulations in inner cities. Research findings underscore the importance of examining the connection between physical risk and the residential location of low-income and minority subpopulations. The tendency for low-income, minority communities to serve as sites for hazardous waste facilities suggests that the more economically depressed and desperate an area, the less capable it is of recognizing and rejecting such hazards (Downey and Van Willigen 2005; Gould 1998; Kawachi and Berkman 2003). Industry is likely to search out areas where resistance to placement of hazards is lowest. Communities with reduced access to economic opportunities are vulnerable to, and more accepting of, the health and environmental costs of hazard placement (Krieg 1998). In such areas, private industries manage to frame hazard placement as a benefit rather than a health risk, reducing the chances of consciousness-raising and local political mobilization. Besides these communities' economic disadvantages, however, places with concentrated minority poverty are disadvantaged by their limited social capital, particularly bridging capital, where ties outside the local community/neighborhood are severely limited. The absence of bridging social capital often prevents successful mobilization. Communities that can mobilize local institutions and grassroots support are more capable of preventing the placement of hazardous activities and sites in their area (Gould 1998).

Indeed, significant changes can occur in communities when the relationship between place and health becomes highlighted and communities become involved in mobilizing against external threats. The first environmental discrimination lawsuit was filed in Houston in 1979, charging that Browning-Ferris Industries had targeted an African American neighborhood for the placement of a municipal solid-waste landfill. The argument was that this represented only one example of a long-term pattern of environmental racism in the city of Houston. Since the early 1920s, five Houston landfills and six of its eight incinerators had been placed in predominantly African American neighborhoods. While the lawsuit failed, it represented a significant first step in the development of an environmental justice movement (Bullard 1990, 1993).

The existence of a newly emergent environmental justice movement organized and controlled by communities of color, with support of local churches networked regionally and nationally and with a history of effective consciousness-raising and political conflict with more structurally powerful social actors may indeed have the capacity to repel private capital interests seeking to externalize hazards in minority communities. This may in fact be sending capital to look at less politically conscious and mobilized communities where local access to economic options may be slightly greater but potential resistance slightly lower.

(Gould 1998:23)

The experiences of residents living along Village Creek have been very similar to the experiences of persons living in hundreds of other American inner cities. The health of these residents continues to be challenged by the environmental hazards produced by under-regulated polluting industries. Yet evidence continues to accumulate establishing the role of environmental hazards in the physical and mental health of those at greatest risk (Downey and Van Willigen 2005; Kawachi and Berkman 2003; LeClere et al. 1997, 1998). While recognition of the unequal distribution of risk is not new, the environmental justice movement has provided a framework for more effective advocacy. This framework allows local neighborhoods and action committees to organize and establish a voice, while at the same time forcing corporations to be more responsible for their actions and location decisions (Taylor 2009). By placing the local experiences of the impoverished into the context of this larger social problem, high-poverty ghetto residents with limited social capital have the opportunity to link to larger interest groups. This creates the bridging social capital that is so often lacking in these areas.

Sociocultural Hazards and Risks in the Residential Environment

A rich tradition of research, pioneered by the Chicago School of urban sociology (Park et al. 1925), has established the existence of a relationship between community structure and various aspects of

quality of life. The classic work of Shaw and McKay (1942) on the ecology of crime and delinquency led to the conclusion that the combination of three structural factors—low socioeconomic status, ethnic heterogeneity, and residential mobility—created residential environments characterized by community disorganization and high levels of crime and delinquency. Since then, researchers have continued to work on isolating the environmental characteristics that contribute to high levels of deviance and their consequences for the community and its residents (e.g. Kingston et al. 2009; Peterson and Krivo 2005; Sampson et al. 2002; Sampson and Lauritsen 1994; Sampson and Wilson 2005; Wilson and Taub 2007). There is some disagreement over the existence of independent community subcultures and their role in propagating systems of norms and values that promote deviant behavior. Nevertheless, researchers generally conclude that even though conventional norms dominate most communities, subcultural differences do exist with a tolerance of crime and deviant behavior clearly varying across structural and situational contexts (Sampson 1997; Sampson et al. 2002).

Perhaps the best evidence to support the assumptions of a subcultural explanation originates from early research on juvenile delinquency, specifically juvenile gang violence (Cloward and Ohlin 1960; Cohen 1955, 1972; Miller 1958). This early work posited that gang behavior was, in part, a manifestation of the general cultural patterns of behavior embodied in the class structure. Certain areas of the city became breeding grounds for delinquency and gang behavior because of the underlying values of violence reinforced and maintained among adults and youth residing in those communities.

In addition to the cultural determinants of risky behavior, researchers have identified physical characteristics that are key markers for hazardous, high-risk environments (Aalbers 2006; Galea et al. 2005; Sampson and Lauritsen 1994). Studies suggest that these places can include public spaces near apartments or other multifamily dwellings, vacant lots and buildings, areas with high rates of geographic mobility and family instability, and street designs that allow for “open-air” drug markets to develop. These markets have the physical characteristics of narrow one-way streets with physical cover, easy and multiple escape

routes, vacant buildings and lots, and landscape shapes that enable smooth-flowing drug traffic as well as a careful surveillance of police activity (Aitken et al. 2002; McEwen 2007). Public areas near multifamily dwellings are notoriously difficult areas to monitor, posing significant threats to adults and young children alike. Keeping safe in such high-hazard areas is a task not unlike that of the soldier trying to survive on the open battlefield.

While alterations in the physical environment make some difference, perhaps a more critical factor in assessing risk exposure is behavioral—people taking unnecessary risks and engaging in health-compromising behavior. For example, “lifestyle” and “routine activities” theories both propose that an individual’s activities affect their level of risk. Thus, the more likely people are to come into contact with potential perpetrators in physical spaces where no one can intervene, the greater the likelihood of victimization (Cohen and Felson 1979; Hindelang et al. 1978). Empirical evidence in support of this general hypothesis is indirect; nevertheless, there appears to be a statistical relationship between location, specific behaviors/personal characteristics, and violent victimization. Teenagers or young adults who are unemployed, from low-income households, and who spend considerable time outdoors in high-risk settings (parks, abandoned buildings, vacant lots, etc.) during the evening, are at greater risk of becoming victims of violence.

Blankets of Protection

Though the physical and psychological risks associated with certain urban spaces and places are substantial, layers of formal and informal protection attached to place help to insulate residents from myriad environmental challenges. These layers of protection moderate the negative effects of environmental stressors and risks on a variety of health-related outcomes. On the basis of this relationship, we can pose several questions concerning the role of protection in understanding the place–health relationship. Are levels of protection similar for all residents, or do they vary by sociodemographic characteristics? Do they vary by place? Are formal and informal sources of protection more important for some populations

living in some places compared to others? What role does the health care system play in moderating risk's impact on particular populations living in certain places?

Over the years, considerable research has developed pointing to the critical role of the family in child development (e.g. Bandura 1986; Baumrind and Black 1967; Bronfenbrenner 1986; Escalona 1982; Rankin and Quane 2002; Repetti et al. 2002). Family and the home provide models for learning, as well as protective environments during development. However, they may also create significant problems for the child in both early and later life. In fact, research shows that one important predictor of health-compromising behavior among young persons is an unstable family structure with moderately high levels of family discord (Cummings et al. 2004). In addition, children from unstable family units are more likely to drop out of high school, become pregnant as teenagers, abuse drugs, and have criminal records either as juveniles or adults (McNeil et al. 2008; Substance Abuse and Mental Health Services Administration 2008).

With health risks high in high-poverty environments, the role of the family as a protector becomes even more crucial. While family structure is clearly important, other characteristics and dynamics of the family are equally critical in moderating health outcomes. "Family protection" comprises a nurturing family environment, parental promotion of learning, a multigenerational kin network, dependable child care in the absence of parents, warm, close relationships with parents, absence of marital and family conflict, significant attention and stimulation during the first year of life, and clear behavioral guidelines and expectations. Hawkins and his colleagues defined the importance of family as a protective factor in preventing or moderating health-compromising, risk-taking behaviors such as drug and alcohol abuse (Hawkins 1995; Hawkins et al. 1992; Hawkins and Weis 1985). Their work indicates that even in the face of overwhelming odds, some children exhibit a remarkable degree of resilience when they have the protection of family, friends, and the larger community. These environmental safeguards enhance youths' ability to resist stressful life events and help promote social adaptation and competence necessary for survival and success

(Garmezy 1983; Jessor 1993; Werner 1990). Thus, at least one parent or reference person, a strong social network outside the family, a supportive educational climate, and a community that provides opportunities and resources for parents and children are necessary assets creating an “environment of support” conducive to adaptation.

Unfortunately, many of these protective factors are not typically present in families, particularly those families facing the challenges of raising children in poverty, with a single parent (usually a mother who works outside the home), displaced networks of support, and inadequate formal support services. In these cases, the child’s mental and physical health risks are elevated and the life of the community as a whole becomes threatened. As the architect of the “War on Poverty,” President Lyndon Johnson, reminded us:

The family is the cornerstone of our society. More than any other force it shapes the attitude, the hopes, the ambitions, and the values of the child. And when the family is threatened or collapses, it is the children that are usually damaged. When it happens on a massive scale the community itself is crippled.

(Lyndon Baines Johnson Library and Museum 1965)

Beyond the risk and protective factors literature, a substantial literature in the sociology of mental health convincingly argues for the role of social support and/or social capital in mediating the negative effects of stressors on individuals’ mental and physical health (Ensel and Lin 1991; Kawachi and Berkman 2003; Lin 2001; Lin et al. 1986; Lochner et al. 2003; Veenstra et al. 2005). Informal networks of support including family, friends, relatives, co-workers, and neighbors provide instrumental, informational, and emotional assistance that can combat the negative effects of stress. The character and overall impact of this support as a stress moderator varies by place of residence as well as the person’s attachment to that community.

Extensive research on social support leads to three major conclusions regarding its role in promoting health and well-being. First, support is directly and positively related to health, but it does not buffer the

negative impact of stressful life events or chronic strains on health. Thus, while support clearly influences health, its role as a stress buffer is debatable (e.g. Ensel and Lin 1991). A substantial body of research suggests that support mediates, rather than buffers, the negative effect of stress on health outcomes. The distinction appears minor, but it is an important one, with very different implications for health outcomes (Ensel and Lin 1991; Thoits 1995; Wheaton 1985). Second, perceived support, even more than actual support, is directly related to better physical and mental health. A perception of strong support from others moderates the negative effects of life events and chronic strains on one's physical and mental health. Third, the most powerful aspect of support appears to be whether or not a person has an intimate, confiding relationship with another person (spouse, lover, friend, etc.). Having a confidant is extremely important for stress reduction, particularly among persons such as the urban elderly, spatially segregated minorities, the homeless, and others who may not have an extensive social network. Recently, the literature on social capital suggests that broader community ties in the form of bonding and bridging social capital also play an important role in stress reduction and overall health (Irwin et al. 2008; Kawachi et al. 2008; Putnam 2000). As noted previously, ties with socially similar others often help people get by, reducing the stress of daily living in challenging circumstances or periods of time in a person's life. Individuals share much in common with such people, and thus having them around in times of need can be beneficial. But people just like the other are also limited in what they can offer. Bridging social capital, social networks that offer access to different people and resources, offer more than the ability to cope with difficult circumstances—they offer the leverage that can actually get people ahead. But is this true for people in every place, or does social capital spend differently in different residential contexts?

General social support and social capital research is informative, providing a good deal of insight into the psychosocial dynamics of health outcomes. However, it doesn't provide much information about the role of place in the provision of social support and social capital and its subsequent impact on health. A spatial analysis focusing on the neighborhood

and the neighbor's role seems particularly relevant for articulating an "ecology of health" approach.

Throughout history the neighborhood has functioned as a place for exchange and mutual aid, meeting both the psychological and material needs of residents. At the same time, industrialization and subsequent community development profoundly changed the ways in which individuals communicate and associate with one another, and as a result, neighboring itself was transformed (LaGory and Pipkin 1981). Over time, the rules of neighboring shifted. The often "taken for granted" expectation of neighbors watching over one another, moving freely from one front porch to another, and sometimes relying on informal neighbor networks for information and assistance was no longer present. The neighborhood appeared to be dissolving, as Tönnies ([1887] 1957) and Wirth (1938) had predicted. Their *urbanism* tradition argued that the changes produced by industrialization caused close community ties to be substituted with secondary ones. More contemporary research seems to support this general notion, and while close interaction among neighbors is not a lost art, it has been supplemented for many by intimacy that stretches beyond the physical boundary of the neighborhood (Granovetter 1973a, b; LaGory and Pipkin 1981; Wellman 1999).

In addition to neighborhood dynamics, we also should recognize that the content of informal support, and how it gets delivered, is not constant across all communities but determined in part by the characteristics of place. Thus, some high-poverty neighborhoods create an "atmosphere of learning" unlike that found in other areas of the metropolis. Typically, individuals are exposed to a range of recurring ghetto-related behaviors that, while viewed as adaptive, may have negative consequences. Displays of violence, public drinking, and idleness are present in many underclass high-poverty neighborhoods, and while denounced by many, the behaviors are allowed to occur. Their occurrence is a function of the larger social organization's failure to control the behaviors, and of a cultural milieu that enables it. Purposeful or accidental, cultural transmission creates a set of values and beliefs that are damaging to the future of any place.

Formal Support Services

The city can be characterized “as a gigantic man-made resource system which contains an abundance of resources for individuals and families to exploit for their own benefit” (Harvey 1972:3). While the city is a resource machine, it is important to remember that access to this machine is spatially constrained. Resources are not equally distributed across the urban landscape; critical resources are more accessible to some than to others. Segregation’s impact on the delivery of services is an important illustration of the role of places in determining access to goods and services, and in turn, influencing health outcomes.

The costs incurred by the “urban health penalty” are significant. The most dramatic illustration of its costs can be seen in how health care services are distributed across the metropolitan area. Inner cities are characterized as islands of illness and premature death. Beyond the risks related to specific health conditions in core urban communities, weakening urban social and economic structures further contribute to the health penalty, and place the poor, minorities, homeless, and other core residents at greater risk. Relying on the hospital emergency room as their primary care provider, many residents encounter major problems with health care, and access is threatened when local urban hospitals have difficulty competing with suburban complexes and sometimes must close their doors. Since the late 1970s and early 1980s, large urban areas have lost many of their local hospitals (Sager 1983; Whiteis 1992, 1997). The irony of this trend points to a major problem facing the inner cities. On the one hand, these communities are the very places where preventive and primary care is needed most. Patients here tend to be sicker and are often without health insurance. Yet, on the other hand, hospitals and health care facilities are overburdened in these communities and have a much lower profit margin than those located in the suburbs. Thus access becomes a critical issue for many, and the withdrawal of services is another instance of the penalty that low-income minority residents pay for their residential location.

Nevertheless, protection and support is available from a variety of non-profits, schools, churches, as well as community and neighborhood

initiatives. This safety net further defines the nature of available “formal support” in the urban area. One excellent example of a non-profit making the difference in the fight against the “urban penalty” is Habitat for Humanity. This organization, founded by Millard Fuller in the early 1980s, has as part of its mission a proposal “to eliminate poverty and substandard housing in the United States” (Fuller 1995). Perhaps better than any other organization, operating in all 50 states and worldwide in nearly 50 countries, Habitat understands the connection between place and health. Whether it is a community with a weakened infrastructure or a blighted neighborhood with no decent housing, Habitat stresses the importance of place in countering the impact of poverty on health and well-being. Fuller not only saw the critical links between concentrated poverty and health, but fervently believed that unhealthy places could be transformed. They can be transformed physically, socially, and spiritually into areas where people can thrive. Providing decent, affordable housing, he argues, can be a prescription for a healthier society. Habitat, more so than any other non-profit organization, has responded to this need and continues to build affordable, decent housing around the world. By 2008, Habitat had built over 300,000 houses around the world, providing more than 1.5 million people in more than 3,000 communities a safe, decent, affordable place to live. In 2009, Habitat for Humanity built more than 5,500 homes for new homeowners in the United States (Habitat for Humanity 2009a, b). It is a powerful example of how a single organization can make a difference in creating and revitalizing places within inner cities around the world.

Thousands of other non-profit groups continue to carve out niches in the local support system, meeting the needs of special populations. Homeless shelters for men, women, and children have increased significantly over the two decades since 1990. In a comprehensive study of homelessness during the 1980s, Burt (1992a, b) gathered data that showed an impressive growth in the number of shelters and shelter beds during the period between 1981 and 1989. In cities with populations of more than 100,000 in every region of the country, both the numbers and rates of homelessness, shelters, and shelter beds increased nearly three-fold over this period of time. By the end of the decade, there were nearly

1,500 shelters serving almost 200,000 persons (Burt 1992a, b). The piecemeal programs offered there, however, cannot begin to meet the complex needs of the urban dispossessed. A 2008 national survey of residential programs serving homeless and near-homeless estimated nearly 20,000 programs serving (with beds) over 600,000 residents (U.S. Department of Housing and Urban Development 2009).

United Way agencies supporting the homeless and hundreds of other causes continue to struggle to meet the needs of those challenged by residing in declining urban environments. Non-profit agencies find their budgets stretched to the limit each year as urban crises expand and new problems develop. In an effort to help fill the gap, churches have responded by developing comprehensive programs addressing a myriad of problems endemic to high-poverty ghetto populations. With more than 353,000 churches and synagogues and a membership of nearly 200 million people, these organizations represent a powerful network of social-service delivery (American Jewish Committee 2003; Early 2006; U.S. Bureau of the Census 2002). Non-profit and government agencies are largely responsible for the bulk of service delivery to those in greatest need. Their resources, however, are limited, and the needs of some populations often go beyond what is available. Outreach is a natural extension of the church and the development of a faith community. Thus, churches have provided a vision of assistance that sometimes supersedes even the most visionary non-profit agency or government leader.

Traditionally, churches have provided care and assistance to the elderly; food, clothing and shelter to the homeless and poor; health care to the elderly and poor; educational programs for youths; jobs and income assistance to the poor; housing and housing rehabilitation to neighborhoods; and infrastructural assistance to communities in need around the world. Exemplary programs abound in the community of faith. One example of a successful, long-standing program is the Central Health Center in Atlanta, Georgia. Started in 1922 by the Central Presbyterian Church, the health clinic now serves more than 10,000 patients a year. It provides basic treatment, physical exams, family planning, dental care, counseling, and a pharmacy. Another example can be found in

Birmingham, Alabama, where the Cooperative Downtown Ministries, a collection of inner-city churches, has provided dental services, shelter, physician access, transportation, job training, and access to comprehensive drug and alcohol treatment programs for thousands of homeless since the early 1980s. Hundreds of other examples around the country illustrate the important “safety net role” that churches can play in meeting the needs of special populations who fall through the formal service-delivery net.

In addition to the church, government intervention has addressed problems plaguing the inner city. Government-sponsored housing, community development programs, Job Corps, Healthy Start, Head Start, and VISTA all have played a role in problem management and assistance for special populations. Government, however, also has been responsible for the production of concentrated poverty and the divided city. Dating back to the Great Depression and the New Deal, governments shaped the direction and evolution of urban space. Generally, the purpose was twofold: (1) to encourage home ownership and (2) to improve living conditions for low-income groups (through, for example, rent control, public housing, and urban renewal). The first goal was largely successful as middle- to upper-class residents found refuge in newly developed suburban areas on the fringe of the city. Unfortunately, homeowners moved from a declining principal-city housing market and infrastructure, leaving the lower class behind and promoting income segregation across the metropolitan area. In effect, successful home ownership programs for the middle class eventually made living conditions for some segments of the poor worse rather than better. For example, though urban renewal was designed to greatly improve the quality of low-income neighborhoods, it eventually promoted an urban spatial structure that gave way to social injustice and segregation (LaGory and Pipkin 1981). Thus while some effort was made to attract the middle class back to the central city and reconstruct the tax base, large areas of dilapidated housing were cleared and thousands of residents displaced. By attacking the physical expressions of poverty in the city and not the underlying issues themselves, urban renewal became a tool of the federal government for maintaining the status quo of poverty in the city. Too

often spatial changes are used to reproduce existing conditions of injustice, rather than to promote change (Lefebvre 1991).

One important agent of protection that has been very successful in aiding and supporting the population of the high-poverty ghetto has been the school. While inner-city schools continue to struggle with low achievement scores, high dropout rates, high personnel turnover, administrative overhead, declining facilities, and a shrinking tax base, they remain one of the most durable and available forms of local protection. Schools traditionally have sought to protect youths, yet in recent years many school systems have expanded their “programs of protection” to include young adult education and, more recently, the “command center” for community-wide prevention and intervention programs. One example of the change that has taken place in the last few decades is the establishment of hospital satellite clinics and hospital-based adolescent clinics that make health care more accessible to youths (Walter et al. 1995).

The growth of the school-based health clinic has been a natural extension of this recent outreach trend; currently there are more than 2,000 clinics serving students in 45 states (National Assembly of School-Based Health Care 2008). With a specific design for reaching underserved youths, school clinics serve as an important medical catchall in high-poverty ghetto areas that are often unable to furnish comprehensive medical services to this difficult-to-reach population. The school clinic provides acute care for minor illnesses, reproductive care, screening for and treatment of chronic illnesses, mental health counseling, immunizations, and health promotion. While parents and community leaders continue to be concerned about the clinic as a distribution point for birth control devices and the implicit promotion of adolescent sexuality, these clinics have proved to be a critical point in the delivery of medical services to youth.

Beyond medical care, schools also attempt to help low-achieving students by providing specific programs to address student motivation, dropout prevention, grade failure, drug and/or alcohol use, and violence. Title 1 has existed since 1965, when the federal government made a substantial financial and organizational commitment to combat the problem of school dropouts. Nationally, the program serves more than 20 million

students in nearly 20,000 schools, with a funding level in excess of \$10 billion (U.S. Department of Education 2009). Its primary focus is on low-income students. The evaluations of Title 1, however, have been mixed; while those schools and students touched by Title 1 programs have clearly improved, improvements appear modest compared to students enrolled in regular curricula (Kennedy et al. 1986). As a natural extension of Title 1, dropout prevention programs sprang up all over the country. By the end of the 1980s, there were nearly 1,000 dropout prevention programs operating in thousands of schools around the country. The majority of these were designed to target high-risk students for special services aimed at improving their academic performance, attitudes, and rates of absenteeism and tardiness (U.S. General Accounting Office 1987).

While schools represent an important component of protection, comprehensive community-based prevention and intervention programs exemplify cutting-edge service provision. Although a more detailed examination of these place-based delivery systems will be presented in Chapter 7, it is important to recognize their significance in providing protection in high-risk, and high-poverty urban settings. One example is the Safe Block Project in Philadelphia, Pennsylvania (Schwarz et al. 1993). The program designed a comprehensive injury-prevention trial focusing on home health hazards and injury knowledge in several poor, urban African American neighborhoods. This injury-prevention effort was one of the first to successfully provide comprehensive prevention programs in extremely poor inner-city neighborhoods. With growing public outcries demanding community-level strategies for transforming the health risks in minority populations (Braithwaite et al. 1989; Hammond and Yung 1991), new place-based efforts must be developed.

Success stories abound for risk reduction programs addressing a variety of other problems. General prevention and demonstration studies show, for example, that the most promising approach to preventing alcohol and drug problems lies in coordinated prevention efforts that offer multiple strategies and multiple points of program access that promote participation by the full community (Office of Substance Abuse Prevention 1991) (OSAP). One of the underlying philosophical

assumptions of the OSAP is that “the community is the best vehicle through which to develop and implement comprehensive prevention efforts.” While this philosophy is important, its execution remains hampered by social, political, economic, psychological, and cultural barriers present in many low-income, minority, underserved communities across the country. The strategy that should be introduced to overcome these barriers, and to effectively address populations at risk and in need, is of critical import to the overall framework of this book and is addressed in Chapter 7.

Physical and Mental Health Consequences for the Urban Dweller

As seen in Chapters 3 and 4, health is intimately tied to place and the circumstances and conditions of place. Places are composed of unique combinations of risks and protection that, depending on their interaction with one another, create significant health consequences. Health risk subcultures can emerge from the combination of unique demographic factors in the urban space (density and heterogeneity), along with the hazards associated with poverty and unemployment. Some populations may also be more at risk than others; Chapter 6 spotlights some of those high-risk populations. The remainder of this chapter presents a brief overview of health consequences for the general city dweller.

Low-income persons, minorities, and urban residents have more health risk factors, including sedentary lifestyles, cigarette smoking, less health insurance coverage, and less preventive care than their counterparts (U.S. Department of Health and Human Services 2009b; Centers for Disease Control and Prevention 2008b; Cockerham 2007; Moy et al. 2005) Thus, while some parts of the population have experienced improving health, the penalty for those unable to afford quality health care, or for those living in areas where access to health care services is restricted, continues to grow. This “urban health penalty” highlights the importance of addressing the multidimensional health problems endemic to high-poverty ghetto residents.

While many factors contribute to the health status of urban ghetto residents, poverty is primary among them. Lack of good nutrition,

homelessness, exposure to violence, substance abuse, inadequate housing, and limited access to health care are all indicators of an area under stress. For many, poverty increases the risk of contracting disease and facing an early death. Unfortunately, adverse physical health conditions have become a fact of life for many high-poverty ghetto residents. Exposure to environmental hazards such as lead, toxic waste, and a variety of pollutants is extremely high in central cities. Children between one and five years of age living in low-income, inner-city families were more likely to have elevated lead levels in their blood compared to children in other, less-threatening environments (Centers for Disease Control and Prevention 2005). Poor, non-Hispanic African American children are at greatest risk compared to low-income Caucasian children. While lead levels have been significantly reduced (72 percent since the early 1990s), approximately 310,000 children younger than five remain at risk for exposure to harmful lead levels in their neighborhoods (Centers for Disease Control and Prevention 2005). Inadequate housing is a significant contributor to lead poisoning, and according to a recent study, lead levels are highest among children living in housing more than 50 years old (Centers for Disease Control and Prevention 2005). These pre-World War II buildings and houses are common in many older central cities in the Northeast and Midwest.

While the structural circumstances of high-poverty ghettos produce risks for some residents, residents' social and behavioral characteristics also contribute to the negative health consequences of places. HIV is becoming more common in the inner city. In 2004, HIV was the leading cause of death for African American women between the ages of 25 and 34 (Centers for Disease Control and Prevention 2008a). Some of the highest reported concentrations of new cases of HIV/AIDS were in the principal cities of New Orleans, Miami, Washington DC, and several other large metropolitan areas with large concentrations of minorities living in the principal cities (Centers for Disease Control and Prevention 2007a). Alcohol and drug use continues to be a major health problem in the United States, with urban areas being particularly hard hit by an increasing concentration of addiction. In 2007, more than 20 million people reported using illegal drugs, which was higher in metropolitan

areas compared to non-metropolitan areas, and likely much of that drug abuse was concentrated in high-poverty ghetto neighborhoods (Substance Abuse and Mental Health Services Administration 2008).

Another significant health risk for city residents is exposure to violence. City dwellers are twice as likely to be victims of violence, and murder rates are more than three times greater in central cities than other parts of the metropolitan area (U.S. Department of Health and Human Services 1998). Gang activity, drug traffic, weapon availability, unemployment, poverty, and a host of other social circumstances contribute to a violence epidemic, which is clearly in need of control. It is essential to understand the role communities play in violence exposure. Communities can either insulate residents from the harmful effects of violence or exacerbate the risk of residents' exposure to violence (Levine and Rosich 1996). As discussed earlier, the physical and sociocultural characteristics of some places can be important predictors of health. Thus, regardless of their general sociodemographic makeup, structural attributes of communities can be important predictors of health-compromising behavior.

Youths are more susceptible to the adverse effects of urban violence exposure. Homicide rates among children have increased more than 300 percent in the last 50 years; these increases are particularly pronounced among high-poverty ghetto residents, especially males and African Americans (Center for Disease Control and Prevention 2009c). For persons between the ages of 10 and 24, homicide remains the number one leading cause of death among African Americans, number two among Hispanics, and number three among Asians and Pacific Islanders. This statistical reality is clearly a consequence of living in risky environments, some of which have become loci of criminal activities. Whether children are perpetrators or victims of violence, it is important to recognize that environmental circumstances can affect their developmental trajectories. A more detailed discussion of youth as ecological actors, and the role that context plays in their development, follows in Chapter 6.

Since the pioneering work of Chicago School sociologists (e.g. Faris and Dunham 1939), research has focused on the critical

relationship between mental health problems and socioeconomic status (Dohrenwend and Dohrenwend 1969; Dohrenwend et al. 1992; Eaton 1986; Kessler and Neighbors 1986; Turner et al. 1995). This early research made us aware of the importance of the urban context in determining the mental and physical health status of residents. By examining the areal distribution of functional psychoses such as schizophrenia, they discovered a relationship between urban residential location and rates of mental illness (Faris and Dunham 1939). The highest rates of illness occurred near the central business district, with rates declining as distance from the urban core increased. This led researchers to conclude that there was in fact a pattern of illness directly related to place. Place and mental health were inextricably linked. As expected, areas with a high prevalence of disease were urban slums where concentrations of poverty, poor housing, crime, and homelessness were the greatest.

Some years later, Srole and associates (1962) conducted a mental disorder-prevalence study in midtown Manhattan. They found significant differences in patterns of disorder distributed across varying socioeconomic groups living in different areas of the city. More recent research, while not as ambitious as these larger epidemiological surveys, is beginning to identify core relationships between mental health and social structure. Variation in individual exposure to stress has been documented by marital status, gender, race, and socioeconomic status (Turner et al. 1995). Social variation in mental health is, in part, a function of systematic differences in the quantity and nature of stress that individuals experience by being located in a variety of social situations and positions. Thus, stress is not just an individual risk factor; stress is seen as a link in a causal chain that starts with social conditions and ends with differences in risk for mental health problems (Aneshensel 1992). As Aneshensel argues, "Stress can be systemic—it may be tied to specific locations or social group experiences and not distributed randomly but rather predetermined by location or social position." Thus, just as the Chicago School anticipated, mental illness is distributed differentially across the urban landscape.

In fact, varying patterns of illness related to community/neighborhood contexts have been documented recently, opening the door for a more careful and thorough spatial analysis of illness and disease (Aneshensel and Sucoff 1996; Brooks-Gunn et al. 1993; Cockerham 2007; Corburn 2009; Kawachi and Berkman 2003). Researchers have started cataloging aspects of life in the urban area, attempting to find out how they contribute to mental health problems. As discussed in Chapter 2, overcrowding is one aspect of the urban environment identified as contributing to mental illness among urban dwellers, but studies of overcrowding have generated mixed results. Some research found modest relationships between neighborhood density and various aspects of mental illness. A number of studies concluded that overcrowding had its greatest impact within the home (Galle and Gove 1978; Gove et al. 1979), exacerbating negative circumstances already present there and contributing to a higher prevalence of mental disorders in areas with high household density (Cockerham 2007).

Conclusion

Inner cities are facing significant health challenges promoted by the dramatic divide characteristic of the late-twentieth century urban landscape. Health status and access to services for low-income minority urban populations are significantly lower than for the rest of the country. In some cases, the health of inner cities most closely resembles that of developing countries and shows little sign of improvement. The negative health image of the city is difficult to overcome. Addressing it requires the concerted efforts of local, regional, and national governments, private agencies, and health care organizations, which pool their resources to change the current status of “health in the city.”

This chapter has attempted to provide an overview of the risks and protections that are products of places. Focusing on the unhealthy aspects of high-poverty ghettos, a review of physical and sociocultural risks highlights the potential impact of these environmental irritants on physical and mental health. While risk and protection vary across the urban landscape, class, race, age, and other sociodemographic

characteristics of populations differentiate concentrations of risk. Clearly, risk affects residents' health in a variety of ways. The next chapter examines risk in more detail, focusing on some of the city's most vulnerable subpopulations—the homeless, racial minorities, youths, and the elderly.