Chapter 8
Application of Two Schools of Social Theory to Neighbourhood, Place and Health Research

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Abstract There is an increasing interest in neighbourhoods in the public health and epidemiology literature. Conventional epidemiologic investigations of neighbourhood health associations have primarily used census and administrative data to describe neighbourhoods. These studies report that people who live in neighbourhoods with higher proportions of people with low incomes or who are unemployed are in poorer health than people who live in neighbourhoods with lower proportions of people with low incomes. It is difficult to translate these sorts of findings into policy or practice. These limitations motivate us to ask how different questions

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might be formulated to understand neighbourhood-health connections in such a way as to move into solution-focused research. In this chapter, we suggest that understanding and applying social theory to neighbourhood-health research questions provokes us to ask different sorts of questions than have been posed by most epidemiologists thus far. We provide some examples of how two sociological paradigms, conflict and interactionist theories, suggest different questions, which then warrant different methods of investigation. To the extent that epidemiology has uncovered mechanisms that connect neighbourhoods to people's health, the most investigated mechanisms are social capital and physical disorder. We take up the specific research in this area with the lens of sociological paradigms.

Abbreviations

CDC Centers for Disease Control and Prevention

8.1 Introduction

Sociologists and geographers have long identified the importance of place, both literal and symbolic, in influencing people's lives (Siegrist 2000). Similar to the term "community," "place" can be defined by webs of relationships and shared identities, though no community or place is homogeneous (Etzioni 1997; Minkler 2004). Recent work by social epidemiologists, however, has explored the important contextual role of geographic area in determining disease outcomes (Yen and Syme 1999; Diez-Roux 2001) and identifying resources such as services, businesses and recreation or hazards such as crime, graffiti, traffic and environmental toxins. One of the first epidemiologic studies of the effects of place showed that people living in a federally designated poverty area within Alameda County, California experienced an age-sex all-cause mortality rate 47% higher than people in a non-poverty area, even after adjusting for multiple confounders (Haan et al. 1987). Subsequent epidemiologic analyses have documented area effects on a wide variety of health-related variables such as physical activity, depression, hypertension, tuberculosis, atherosclerosis and kidney disease (Yen and Kaplan 1998, 1999b; Acevedo-Garcia 2001; Diez-Roux 2001; Diez-Roux et al. 2003; Cubbin and Winkleby 2005; Merkin et al. 2007).

Policymakers and foundations are looking to neighbourhoods as one of the key social determinants of health, which could be an important intervention point to address health disparities, a current priority in the United States. For example, the largest health foundation in California, The California Endowment, has a program area in disparities and within that area a focus on diabetes and obesity. One report that emerged from this focus area is on engaging communities to change nutrition and physical activity environments. PolicyLink, an American national policy advocacy organization, recently created the Center for Health and Place and in 2007 released a

report entitled *Why Place Matters: Building the Movement for Healthy Communities* (Bell and Rubin 2007). An American public television documentary series called *Unnatural Causes*, another example, which aired in the spring of 2008, focused on health disparities and featured a segment on place and health connections.

Neighbourhood and place research in epidemiology is growing rapidly with the availability of geospatial data and accompanying quantitative methods (e.g., multilevel modeling that takes into consideration spatial autocorrelation). In spite of this rapid growth, if we look at the current body of literature with an eye toward taking the sum total of the findings and making policy or designing programs, it would be difficult to do so. The key limitations are the study designs (predominantly cross-sectional), the reliance on census or administrative data and the often limited scope of the questions such research addresses, all of which constrains the ability to translate findings into policy or program content. The majority of published studies rely on cross-sectional data. Epidemiologists and social scientists are troubled by cross-sectional studies because of the limitation of assigning cause and effect. A study reports that people who live in a poor neighbourhood (i.e., a neighbourhood with a high proportion of poor people) were more likely to have heart disease than people who lived in a non-poor neighbourhood. To an epidemiologist, the simple association of these two characteristics does not provide the information to understand how the poor neighbourhood would cause heart disease in the resident. Epidemiologists could speculate that a poor neighbourhood is less safe, so a person who lives there is not as comfortable walking in the neighbourhood and gets less exercise. Also, epidemiologists might hypothesize that a poor neighbourhood causes stress for its residents, which can lead to increased vulnerability to chronic diseases. Social scientists are particularly troubled by the issue of selection. They might argue that with only cross-sectional data, it is not possible to determine that the neighbourhood environment causes poor health. People with certain characteristics might sort themselves into neighbourhoods and the factors that influence the sorting may cause health problems.

Another issue with the current body of neighbourhood-health research is the reliance on administrative definitions of neighbourhood (e.g., census tracts or dissemination areas). Administrative definitions are problematic because rarely do these correspond with historically recognized neighbourhoods and neighbourhoods as residents actually conceive of and move through them (Coulton et al. 2001; Yen et al. 2007; Smith et al. 2010). Using administrative boundaries to define neighbourhoods makes administrative data the obvious way to characterize the economic circumstances of the residents (e.g., percentage of people with incomes below the poverty level, percentage of female-headed households with children under age 18, percentage of adults who are unemployed). Knowing that living where a high proportion of people have poverty-level incomes might be associated with poorer health is difficult to translate into a policy.

Should the policy be to disperse people with lower incomes or increase the incomes of the people who have low incomes? Indeed, the former has been tried in the United States in the well-documented HOPE IV program and evaluation that provided vouchers to people who were eligible to live in public or subsidized housing (Greenbaum 2002; Clampet-Lundquist 2004; Popkin et al. 2004; Kleit 2005).

A panel study of nearly 900 HOPE IV program participants surveyed their health in 2001, 2003 and 2005. At baseline, panel study respondents were in far worse health than other low-income households, reporting high rates of poor perceived health, asthma and depression (Popkin et al. 2002). Respondents who had moved to private market housing with vouchers were living in better housing in neighbourhoods that were safer. In contrast, those who remained in their original units or had moved to another traditional public housing development did not experience these improvements in their circumstances (Buron et al. 2007; Comey 2007; Popkin and Cove 2007). Regardless of the new living circumstances, HOPE VI participants did not report improvements in their health in 2005 (Manjarrez et al. 2007). We are not aware of another intervention of this sort and maintain that, in general, using policy to direct where people live such that people with low incomes are dispersed among people with higher incomes is not a policy that most governments would entertain.

While there have been impressive contributions in the neighbourhood-health research literature, there remains several conceptual and methodological challenges that could benefit from the contribution of other sociological theory and concepts (Macintyre et al. 2002; O'Campo 2003; Bernard et al. 2007). Consider, for example, the question of causal direction: Do multiple liquor outlets increase the likelihood of violent crime or do people with violent inclinations tend to move to areas with liquor outlets? Or do both violent crime and liquor outlets depend on a third factor, a factor that may differ by local community resources versus demands, which may call for distinctly different intervention strategies? Sociological theories regarding the effects of local and cultural context on behaviours, risks and social environment can help guide the choice of sophisticated social epidemiologic models (Kaplan and Lynch 1999; Marmot 1999; Kaplan 2004). Such coupling of theories with methods could provide crucial information about neighbourhood issues to advance scholarship with regard to directionality, for example, and move into solution-focused research.

In this chapter we explore how two sociological paradigms can help direct research on neighbourhoods or place and health, with particular attention to how they can help uncover mechanisms that are amenable to policy actions or strategies for addressing health disparities. By way of illustration, we root our exploration in an extended consideration of two adjacent neighbourhoods featured in Eric Klinenberg's (2003) *Heat Wave: A Social Autopsy of Disaster in Chicago*. We chose this example because the book explicitly aims to show how "natural" disasters are far more social and, therefore, preventable than is often presumed and because the work has figured prominently in public debates about the health consequences of social isolation. There is other examples we could have selected. After we illustrate key concepts from the two sociological paradigms with Klinenberg's work, we examine social capital as a potential mechanism that links neighbourhoods to health. In particular, sociological concepts are used to extend the notion of social capital beyond how it has been conventionally used and understood in epidemiologic research. We argue that the consideration of the highlighted sociological theories and others can lead to a better understanding of the social processes that underlie the significance of neighbourhoods to health and that such understandings in turn

may provide clearer directions for thinking about ways to promote health through neighbourhood-based interventions.

Other than the identification of the composition of an area as a risk factor for poor health, another factor that has been identified as an important neighbourhood characteristic is social capital. Neighbourhood social capital manifests, in part, as the relationships one forms in one's neighbourhood whether with other residents or with service providers. There are several definitions of social capital, each emphasizing different qualities (Lochner et al. 1999). The sociologist Pierre Bourdieu (1983, 1986) introduced the concept of social capital as the actual and potential resources that one has access to by virtue of belonging to a group; thus, social capital resides in the connections and relationships one has with others. The political scientist Robert Putnam (1993) subsequently argued that "social capital is a feature of social organizations such as networks, norms and trust that facilitates coordination and cooperation for mutual benefit." Expanding on Putnam's work, Sampson et al. (1997) argue that a key function of social capital is "collective efficacy," comprised of two related concepts: "social cohesion," defined as norms of trust, and "informal social control" defined as the willingness to intervene to stop negative neighbourhood activity. To develop the findings on neighbourhood social capital into policy or practice, it has to be understood how social capital is created and maintained. Later in the chapter, we will provide an example of research into social capital informed by theoretical frameworks.

During the historic 1995 heat wave that hit much of the Midwestern United States, North Lawndale and Little Village, two adjacent neighbourhoods in Chicago, had very different mortality rates: North Lawndale's was unusually high, while Little Village's was unusually low. Why? Conventional epidemiologic approaches would likely look at the demographics of the people who had died. Men have higher mortality rates than women so perhaps North Lawndale had many more old people than Little Village or had older men. In fact, neither was the case. Poor people have higher mortality rates than non-poor; perhaps North Lawndale had more poor people than Little Village. This hypothesis was indeed found to be true; in 1990, median family income was $14,000 and 44% of the residents lived under the poverty line in North Lawndale. The corresponding figures for Little Village were $23,000 and 22%, respectively. Were there racial and/or ethnic differences in the two neighbourhoods? African Americans have higher mortality rates than Whites for heart diseases, stroke, cancer, asthma, influenza and pneumonia, diabetes and homicide (Office of Minority Health 2009). In fact, North Lawndale had a majority African Americans living in the neighbourhood, while Little Village had a majority of Latinos living in the neighbourhood. This might be the end of the conventional epidemiologic investigation with the conclusion that the higher mortality in the wake of the heat wave in North Lawndale was due to the higher proportion of poor people and African American residents.

Yet with this conclusion, what sort of strategies can we develop within solution-focused options to prevent a similar outcome in the future? Dispersing the impoverished and African American populations is clearly neither feasible nor desirable, and it sidesteps a host of important etiologic questions about the connections between place, race and health. Multiple additional questions could be articulated

and investigational strategies pursued based on the information of the different socioeconomic and racial and/or ethnic compositions of the two neighbourhoods. For example, why did the African Americans in North Lawndale die at higher rates than the Latinos in Little Village? What is it about living in a neighbourhood with a high proportion of poor people and African American residents that puts an individual at higher risk of mortality when a natural disaster occurs? Or was there something about the physical environment or available resources in the North Lawndale neighbourhood? What resources did residents living in Little Village have that helped them to survive? Or are there causes that could be found in the histories of the two neighbourhoods that could explain both their differing socioeconomic and racial compositions as well as their disparate mortality rates? Pursuing these questions can provide evidence to guide the design of meaningful programs or interventions.

Klinenberg applied a number of concepts informed by larger social theory paradigms to determine a research program to answer the questions posed above. These concepts draw from both conflict theory and interactionist theory, two major sociological theoretical paradigms that are not mutually exclusive. Below we provide a brief overview of key concepts within these paradigms with a focus on those paradigms that would be relevant for investigations of neighbourhood, place and health relations.

8.2 Conflict Theory

The *conflict paradigm* in sociology contends that the organization of society can be understood and analyzed as the outcome of power struggles for material and ideological resources. Material resources are the physical things that people need to survive (e.g., shelter, food) or those that they wish to possess (e.g., leather jacket, air conditioning). Ideological resources are ideas, beliefs and practices that help people acquire increased access to material things and/or to power and prestige. This paradigm asserts that conflict is inherent in any society because society is always stratified into status groups that have differential access to resources, including those that promote well-being and higher status. Traditionally, this paradigm asserts that People with the most resources are those who control production, specifically the "means of production" or the non-human inputs that produce wealth (e.g., factories, technology and tools). Karl Marx (1978), one of the early conflict theorists, highlighted the unequal distribution of the means of production – for instance, between the factory owner and the worker – as the fundamental tension in capitalist societies. Contemporary conflict theorists emphasize that society is stratified along more complex conceptions of class (Olin Wright 1996) as well as other dimensions including political affiliation (Weber 1956), race and ethnicity (Blauner 1972) and gender (Hartmann 1976).

The interplay between *structure* and *agency* is a key empirical question from the perspective of conflict theory. Agency is associated with individuals' ability to create ideas and intervene (to variable degrees) in the social circumstances in which

they live. However, people's freedom and creativity to produce new ideas, objects and actions are conditioned by their particular historical moment, their structural positions and their differential access to resources (Marx 1978). This circumstance is the influence and effects of structure. Although a neighbourhood might be poor, what are the opportunities and obstacles encountered by an individual who would like to organize a community group that might then promote social capital and create a basis for neighbourhood-level changes? A good example comes from the work of Yonas and colleagues (2007) in Baltimore. They interviewed "prominent neighbourhood individuals" in neighbourhoods that were at low and high risk for youth violence. A group of mothers in a high-risk area organized themselves and their neighbours to speak out against and fight the violence. Residents perceived these efforts to be somewhat effective in reducing violence. Moreover, the events aimed at reducing youth violence gave neighbours a chance to meet and support each other.

Interdependent processes such as *political economy, ideology* and *hegemony* influence the interplay of structure and agency. These three processes maintain the stratification of society and the unequal distribution of material and ideological resources (Scott 1996). *Political economy* refers to the interdependent relationships linking economic to political systems, in which legislative, regulatory and political institutions and processes determine how production is organized and what is distributed and how. Simultaneously, economic power and privilege shape decision making on policies, programs and other institutional actions. For example, the concept of political economy can be used to uncover the political and economic forces that create specific employment opportunities (e.g., location of a stadium for professional sports events or attracting a corporation to locate its headquarters), educational opportunities (e.g., philanthropic dollars from executives who support charter school expansion) and environmental harms (e.g., sites of hazardous waste facilities and spatial concentrations of liquor and fast food outlets) in a neighbourhood with downstream consequences for community resources and health.

The conflict paradigm also contends that social stratification in resources, power and status is maintained not through sheer force alone but also through ideological processes. Within this paradigm, *ideology* refers to the prevailing political and cultural ideas of the society. The dominant ideologies of a time and place are not neutral ideas as they help to legitimate the prevailing social order and hierarchy as natural, proper, taken-for-granted and difficult to change. Moreover, an analysis of ideological processes is important because it pays attention to how certain ideas, concepts, understandings of a situation and discourses are mobilized in the struggle for resources and power. Weber (1958) defined *power* as "the ability to impose one's will on another, even when the other objects." In this view, power is always a social relationship rather than an intrinsic characteristic of a group, and the distribution of power, in turn, determines the shape and degree of stratification, inequality and the distribution of life chances. Moreover, power relations can also be thought of as embedded within institutional arrangements of a society and not only in the overt or intentional actions of one group against another.

Finally, closely related to the notion of ideology is the concept of *hegemony*, which refers to the representation of the interests of the ruling class as universal

interests (Gramsci 1929). For example, democracy and equality are held up as ideals of all citizens yet can be interpreted and practiced in ways that largely serve the ruling class. Hegemonic domination depends upon the capacity to elicit and manufacture consent among the masses through control of social and cultural ideas as well as institutions. That is, it requires the production and maintenance of ways of thinking and understanding the world that legitimate the prevailing, unequal social order. In general, ideologies and hegemony benefit the ruling class by shaping people's understanding of the world they live in as a natural way of life.

To demonstrate the potential empirical applicability of concepts discussed in this section, let us return to the Chicago heat wave example. In July 1995, temperatures soared, and 739 more Chicago residents died between July 14 and July 20 than in a typical week for that month. The United States' Centers for Disease Control and Prevention (CDC) conducted an intensive matched pair study of decedents and paired cases to controls selected within walking distances from the decedent's residence. The reported results observe that the more vulnerable residents were those who did not leave home daily, had a medical problem, were confined to bed, lived alone or who lacked air conditioning, access to transportation and nearby social contacts (Semenza et al. 1996). However, as Klinenberg argued, the CDC's study design precluded the ability to identify neighbourhood or regional differences in heat wave mortality: "The CDC study directs the attention of public health agencies to the particular set of individuals who are most vulnerable to heat-related problems, but not to the places where such problems are likely to be concentrated."

In contrast, Klinenberg used social ecology, what he calls a "political economy of vulnerability" and the notion of "symbolic violence" as an analytic lens that enabled him to take account of neighbourhood-level determinants and effects that he believed led to geographic concentrations of mortality during the heat wave. His analysis served to illustrate the roles that political economy, ideology and hegemony played in producing the disparate mortality between North Lawndale and Little Village. He identified these two neighbourhoods intentionally, seeking out two places with similar demographic features but with divergent consequences from the heat wave. The similarities include similar microclimates, same number of seniors, same proportion of seniors living alone and same proportion of seniors living in poverty. North Lawndale experienced a mortality rate of 40 per 100,000 residents; whereas, Little Village experienced a rate of 4 per 100,000. Historically and visually, the two communities are "worlds apart." North Lawndale had been a neighbourhood that had attracted immigrants who worked in nearby manufacturing plants. When those plants closed, the economic foundation of the neighbourhood was severely compromised. As workers relocated, the population base to support local retail and services eroded. The area had lost 60% of its residents between 1960 and 1990, and those who had moved away were less able to support their elderly family members who remained. By 1995, the year of the heat wave, North Lawndale was characterized by abandoned buildings, commercial depletion, violent crime, degraded infrastructure and family dispersion. In addition to these characteristics, there had been a disintegration of the safety net of social services and programs that could have mitigated excess mortality.

On the other hand, Little Village had busy streets, lively commercial activity and a low crime rate. The activity in the streets drew people out, including seniors, promoting social interactions with neighbours, shop keepers and community service providers. Unlike the population decline of North Lawndale, Little Village grew by 30% between 1970 and 1990. In 1996, people described Little Village to Klinenberg as "booming." There were people in the streets from the morning until 9:30 p.m. in the evening on most days. During the heat wave, older people sought refuge in the air-conditioned stores in the main commercial center, something they often did on ordinary summer days. Some residents described the neighbourhood as too crowded, but a positive side effect of this density was that people were rarely alone. Also, the majority Latino residents often relied on the proximity of the older generation, usually grandmothers, to provide affordable child care. The ongoing connections within generations meant that seniors were not isolated in Little Village.

Klinenberg's investigation into the histories of these two neighbourhoods shows his application of the concepts of political economy and ideology within the conflict theory paradigm. Examples of the political economic factors include investment of private resources (e.g., the sites of manufacturing facilities), accompanying economic opportunities (e.g., a base for small businesses near residential areas where workers settle) the subsequent decline when manufacturing facilities close, and the distribution of social services and programs. Locating a factory is a decision with inherent tensions. More than one location would be considered and when a decision is made, the locations that were not chosen lost the opportunities associated with having a factory in their midst (and would also "lose" the exposure to any pollutants that the factory will produce or other negative effects). Factory owners might consider whether there is nearby housing for workers or if transportation between nearby housing and the factory is suitable. Once a factory is built and operational it will serve to promote other business opportunities, such as lunch vendors for the workers. Broader economic circumstances may lead to factory closures, such as competition from overseas labour. These decisions are rarely informed by economic factors alone; rather, they are shaped by politicized ideologies about what kinds of neighbourhoods have a better economic climate, labour market and client customer base. Thus economic decisions and political processes operate together to produce markedly different kinds of neighbourhoods that, in turn, influence the actions and behaviours of their residents in different ways.

Moreover, supporting and sustaining the stratified political economy within North Lawndale and the contrasting history of Little Village were rhetorical responses to the heat wave that exemplify the significance of ideology and hegemony. Klinenberg chronicled how Chicago's political leaders repeatedly emphasized that "government alone cannot do it all." This message was intended to help justify government cutbacks in social services and investments in poor communities and implied that not only did communities need to step up but also that individuals needed to take better heed of expert advice to protect themselves against the effects of the heat wave. This line of discourse helped to construct a particular ideological understanding of the nature of "the problem" – the failure of communities and individuals to help themselves. To the extent that those in political power convinced the

public that failures on the part of neighbourhoods and individuals were indeed the cause of excess mortality from the heat wave, this logic sustained the prevailing unequal social order, contributed to hegemonic domination and ultimately helped to *socially* produce racially disproportionate deaths from "natural" disasters like the 1995 heat wave.

Klinenberg's application of theory and subsequent analysis showed how a catastrophic event revealed underlying fissures, such as gaps in services and social pathology, which caused disproportionate mortality. Rather than individual-level characteristics of age, sex or race and/or ethnicity, his analysis exposed institutional and social mechanisms to be responsible for the geographic concentrations of excess deaths and, in so doing, highlighted the connections between neighbourhood and health, all made visible through attending to theoretical concepts associated with the conflict perspective.

8.3 Interactionist Theory

In this section, we describe concepts within the interactionist paradigm. By using the term *interactionist* we refer to scholarship in the tradition of symbolic interactionism as well as other frameworks and perspectives that emphasize interpretations and meanings of social actions and interactions. The interactionist paradigm is most focused on meaning-making and interactions among human beings. Within this broad paradigm (which is not mutually exclusive of the conflict paradigm), the social world is seen as consisting of fluid, contingent meanings created by people, which need to be understood within their own material and imagined contexts. Imagined contexts are the collective memories and actions that people share about a particular place or experience (Anderson 1991). The primary goal of the interactionist paradigm is to understand the social world and its collectivities (i.e., representations of multiple groups) by examining how people construct and act in their social worlds. While there are multiple varieties of interpretive approaches, they share the perspective that the social world is produced and reproduced through constant engagement with others and oneself, made possible through language and shared understandings and interpretations. Interactionist theorists do not assume that the meanings of things are inherent or intrinsic to those things, but rather they are mutually and collectively constructed and defined and can be redefined as humans interact with one another (Blumer 1969; Strauss 1993).

Interactionist theorists analyze and examine how history and power shape identities, how people ascribe meanings to and interpret their physical and social environments and the situations that face them, how those meanings and interpretations then shape people's actions toward each other and their environments and how cultural, economic, and political practices arise and are maintained within society. Researchers working within the interactionist paradigm have historically been primarily concerned with the micro and meso level of human activity and the constant social interactions that create, "build up" and sustain organizations, institutions,

social worlds and ideologies or discourses (i.e., ways of representing). More recently, however, scholars have used the kinds of questions that animate the interactionist paradigm to trace the relationships between the micro, meso and macro levels of social action. These kinds of research aim to illuminate how personal and social identities, meanings and arenas of human interaction and practice both shape, and are shaped, by social structures and institutions at the macro level.

Application of the interactionist paradigm leads to a somewhat different set of questions than have been asked so far: What meanings do we ascribe to things, people, groups, acts and events? Where do these meanings come from, and how do we continually shape and reinterpret them? How do we then take those meanings and use them as the basis for how we act toward things? How does human action contribute to the production and reproduction of what we see and experience as "society"? What are the relationships of human actions to social structures and institutions?

The potential applications of these questions to exploring neighbourhood-health relations are numerous, as Klinenberg's case study of North Lawndale and Little Village helps to demonstrate. North Lawndale residents commonly described the area as "bombed out," while, in contrast, Little Village residents characterized their neighbourhood as "booming." In Little Village, seniors, as everyone else, would often be in the streets or on hot summer days in stores or senior centers with air conditioning. The fear of crime and the desolation of abandoned buildings kept the seniors of North Lawndale in their homes isolated from each other and other North Lawndale residents. As Klinenberg chronicles, political and economic disinvestment in North Lawndale was motivated in part by the elites' constructions of the "inner city" and "black neighbourhoods" as bad places to do business and as populated by undeserving residents. Residents, in turn, thought North Lawndale was not the kind of place to raise kids and so younger adults who could leave moved away, leaving the elderly and poor residents behind. These discourses about this particular neighbourhood – and the material consequences they had on economic and political decisions about locating businesses and services and on families' choices – show how meanings attributed to North Lawndale were jointly shaped alongside actions at the structural all the way down to the individual level.

Sampson and Raudenbush (2004) described complex findings with regard to perceptions and direct observations of disorder in Chicago neighbourhoods, which corroborates the interrelationship between the material circumstances of neighbourhoods and the ways in which they are perceived. Social structure was a more powerful predictor of perceived disorder than observed disorder. They suggested that "residents supplement their knowledge with prior beliefs informed by racial stigmatization."

Without asking and understanding residents' answers to the questions of the perceptions, interpretations and meanings that motivate their own actions, programs intended to improve neighbourhoods and enhance their health-promoting characteristics or designed to bring communities together for the same purpose may be irrelevant, ineffective or even counterproductive. In fact, as we turn to the specific example of social capital below, we see how one study revealed how difficult it was

for people to have social capital in an impoverished area because of fear, distrust and the physical design of housing.

8.4 Neighbourhood-Health Mechanisms – Social Capital and Physical Disorder

The quantitative literature for neighbourhood-health associations points most commonly and consistently to social capital, civic engagement and physical disorder as plausible mechanisms for how a neighbourhood is associated with health (Cattell 2001; Ross and Mirowsky 2001; Lochner et al. 2003; Sampson 2009). Leyden (2003) reported that people living in more walkable neighbourhoods (i.e., proximity to services) were more likely to know their neighbours, participate politically, have greater trust and faith in people and be more socially engaged. Studies have shown that greater levels of social capital are related to increased physical activity (Greiner et al. 2004; Kim et al. 2006). In quantitative literature, social capital is measured with survey questions about social networks, number of friends, membership in organizations and the like. Initially epidemiologists, among other researchers interested in social capital, investigated simple associations that suggested that having more friends, being a member of more organizations and other measures of social capital were related to better health. Later social scientists pointed out that having fewer, rather than greater, contacts in certain settings could be better for health, drawing conclusions in part from William Julius Wilson's (1990) descriptions of impoverished areas of Chicago. O'Brien and colleagues (2003) also found this to be the dynamic for African American children, ages 3 and 4 years old. That is, children in poor neighbourhoods had fewer behavioural problems if their parents did not know many neighbours compared to children in the same poor neighbourhoods whose parents knew more neighbours. In non-poor neighbourhoods, the association was the opposite; children whose parents did not know neighbours had more behavioural problems than the children of parents who knew many neighbours did.

Moreover, with access to geospatial data, studies can now characterize neighbourhoods in greater detail, offering findings that can contribute to better articulating the relationships between social capital, physical disorder and health. A recent quantitative study tested the hypotheses that parks would facilitate social interactions and cooperation, alcohol outlets would interfere with the development of trust and operation and fast food outlets would negatively affect collective efficacy and interpersonal interactions (Cohen et al. 2008). The authors specifically used collective efficacy as their measure of social capital. Collective efficacy, measured with a validated survey tool, is an aggregate measure of individual perceptions of "social cohesion among neighbours combined with the willingness to intervene on behalf of the common good" (Sampson et al. 1997). The authors verified their hypotheses that parks would facilitate social interactions and cooperation and that alcohol outlets would interfere with the development of trust. However, fast food outlets and collective efficacy were not linearly associated. The authors speculated

that fast food outlets might very well serve both local residents and commuters such that the effects of local people congregating could be offset by the presence of outsiders. In conclusion, the authors suggest that urban design, operating through social cohesion mechanisms, does have implications for health.

However, it is not always clear how current knowledge about these mechanisms can translate into strategies for solutions, as it is often the case that more fundamental social processes and histories operate to produce neighbourhoods with low levels of social capital and high levels of social disorder. Moreover, while social capital and social networks had been identified with positive health, it is not clear what sort of networks (e.g., strong or weak, homogeneous or heterogeneous) were most effective for creating social capital with positive effects for health. Cattell (2001) conducted qualitative research in two housing projects in East London to examine poverty, neighbourhood and health and well-being and to consider the role of social networks and social capital. She selected two areas that were economically deprived with dissimilar opportunities for participation. She interviewed 35–37 residents from each area and approximately 15 non-residents who worked in the two areas. Her research questions included: (1) What is the mediating role of social networks in the relationship between poverty and health and place and health? (2) Does the local neighbourhood context affect network formation and the genesis of social capital? (3) Is participation a major source of social capital? and (4) What are the processes by which health can benefit from involvement? Cattell described how the social interactions and residents' perceptions were affected by the physical geography (e.g., location of major roads, railways and docks), housing design and the social and economic structure in the neighbourhoods. The housing design directly affected social networks and social capital in that it could support or hinder neighbour interactions and "helping each other out" with regard to child watching.

Cattell also found that the majority of people in both areas who did not join activities and organizations were constrained by poverty, feelings of defeatism and the neighbourhood's reputation. Suspicion negatively affected social capital: "Lack of neighbourhood trust can add to a mother's financial problems and have implications for health. As a resident explained: 'It's difficult to manage, but if your child doesn't look smart someone might call the social services in and say the child is being neglected. So if you buy winter shoes for the child, you may have to go without food.'" She concluded that "the predominant expectation of 'you look after your own'…is both evidence of social capital – of the 'thick trust' kind – and a block to wider social trust."

Thus, Cattell's study shows that social capital, networks and trust may be operating in far more complicated relationships than conventionally thought and that these factors could not be investigated using conventional statistical analysis. They do not seem to express varying aspects of a more or less singular phenomenon, at least in this case, and there are sometimes unintended consequences to the kinds of ties that are widely seen as being beneficial. Moreover, it was clear that the availability of opportunities for interaction and participation was simply not enough. The two neighbourhoods had dissimilar opportunities for residents to make connections with one another, but the levels of participation were similarly low.

We would argue here that using the two theoretical paradigms described above could expand the questions social epidemiologists might ask of Cattell's findings and have the potential to improve upon and make more nuanced sense of some of these findings. Other questions researchers might pursue could include asking residents: What do you see as social capital or physical disorder? (This question is suggested as a way to find out the meaning of social capital or physical disorder to people in addition to the identification of specific sources of it and should be written using phrases that are more meaningful to the study subjects.) More specific questions to delve into the ways residents generate social capital or the level of social capital in an area could include: Who do you go to for help when you are sick? The application of the concept of political economy would further provoke questions of other actors who influence how the resources are distributed among and within neighbourhoods such that the role and perspective of political leaders, civic leaders and business people would become part of an investigation into the way social capital or physical disorder is generated, maintained and distributed. Examples of resources include grocery stores (i.e., where they are located), work opportunities and schools. Examples of disorder include economic or ethnic segregation, redlining or government disinvestment. If we learn the decision makers' shared and competing ideologies regarding resource distribution and health held by these leaders and residents, this knowledge can be used to create communication campaigns and interventions (e.g., promote locating a grocery store where one is needed). By taking an interactionist approach, it can be understood how people take care of themselves in and through their own neighbourhood or, in other neighbourhoods, by examining their actions. We have used this approach in a qualitative study of older adults, asking them where they go for their usual activities and what being healthy means to them. This study highlighted how much time older adults spend outside their neighbourhoods in other "activity spaces," a concept previously identified by sociologists and geographers (Matthews 2008).

8.5 Future Research Directions for Neighbourhood-Health Research

One of the authors, Irene Yen, is an epidemiologist who has conducted conventional epidemiologic research into the association between and influence of neighbourhood environments on health (Yen and Kaplan 1998, 1999a; Yen et al. 2006, 2008). As she has become familiar with social theory, this has changed her thinking and approach to the research. Rather than rely on survey tools, she has developed skills in qualitative research methodologies (Yen et al. 2007).

For a project on the influence of neighbourhood environment on the health of older adults, she began with intensive interviews. These interviews were guided, in part, by a concept about connectedness to neighbourhood developed by geographer Graham Rowles. Rowles' (1983) term for this connectedness is "placement attachment." Place attachment emerges from peoples' sense of a places' social and

physical "insidedness." Social insidedness comes from everyday social exchanges over long periods of time resulting in integration into the social fabric and an overarching identification with a locale that is largely unconscious. Physical insidedness comes from familiarity and routine behaviours within specific settings. Place attachment is a concept consistent with the interactionist paradigm, featuring interrelationships of people and meaning-making. Some of the questions asked included: What do you do in your neighbourhood? Where do you spend time? Do you like your neighbours? Why or why not? In addition to learning about the potential importance of other locations for the well-being of older adults, as mentioned above, the study highlighted how a neighbourhood changing over time affects these older adults. Many people stay in one place or "age in place," while similarly-aged neighbours move away, and younger people move into the area. The older adults feel a social distance and unfamiliarity with these people, even though they may have lived in the neighbourhood for decades.

Other future work that Irene Yen is currently exploring is moving into the policy arena. There is a policy called "Complete Streets" being promoted in the United States by a coalition of urban planners, public health experts, transportation planners and the American Association of Retired Persons (a national, senior advocacy organization). Complete Streets policies are road design guidelines that make roads accessible for people of all ages. They are location specific and highlight the need for sidewalks for walking, bike lanes for cyclists, transit stops for people without cars and the like.

8.6 Conclusions

We hope that the examples provided above demonstrate how the application of sociological paradigms leads to asking different questions in order to move neighbourhood-health research into solution-focused research. These paradigms help us analyze the fundamental processes that shape neighbourhoods and their residents and, thereby, understand the *conditions* under which particular solutions and/or interventions do or do not make sense.

In addition to highlighting how the application of social theory could change the direction of research on neighbourhoods and places and how they affect health, the examples we present suggest the value of natural experiments, or investigating phenomena as they occur, as in the case of the terrible 1995 heat wave in Chicago. Other examples that are pertinent at time of this writing include the effect of the mortgage foreclosure crisis in the United States, including neighbourhood transformation as people moved in during "The Housing Bubble" and then moved out when they could not keep their homes, as well as the rebuilding of New Orleans after hurricane Katrina. These examples also highlight the importance of place-specific investigations and the contribution of understanding the historical processes over time.

Application of social theory also highlights different methods than traditional epidemiologic survey and statistical approaches. Klinenberg used direct observation (walking in the different neighbourhoods), interview (talking with residents and business owners), content analysis (reading newspaper articles) and historical records to investigate the differences between the two Chicago neighbourhoods. Cattell, similarly, used a variety of ethnographic and qualitative methods in her study.

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