COMMUNITY-BASED URBAN ENVIRONMENTAL MANAGEMENT

A CASE STUDY OF LOW-INCOME SETTLEMENTS IN DELHI, INDIA

by

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A thesis submitted in conformity with the requirements

for the degree of Doctor of Philosophy

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Community-Based Urban Environmental Management: A Case Study of Low-Income Settlements in Delhi, India

Doctor of Philosophy 2008

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ABSTRACT

This thesis investigates community-based approaches to environmental management in a low-income area of Delhi, India. The research site consists of several neighbourhoods within Sultanpuri Resettlement Colony, a sprawling residential area situated on the northwestern fringe of the city that was established by the government during the 1970s for relocation of squatter households. Given that the level of planned infrastructure and services is fairly basic in Sultanpuri, the study focuses on collective action under the PLUS Project, a recent community-NGO-government collaboration to improve water supply, sanitation, solid waste management, and local municipal parks. The study is motivated by the general lack of documentation about environmental conditions in low-income settlements in urban India and the limited academic attention thus far. Further rationale is the largely unanswered matter of whether, and how, the urban poor can be reasonably expected to act together, either by mutual-help or with external assistance, to achieve a better-quality environment. The research design is a mixed-method case study comprising a community-wide household survey; several smaller purposive surveys of local residents; semi-structured interviews with NGO staff, government officials, and other informants; and a literature search. Social capital and collective action theories are utilized to characterize the prevailing social dynamics in the

study community and to assess the inherent potential for collective action around local environmental management. Empirical findings show a somewhat low level of social capital in Sultanpuri, as evidenced by patterns of informal social interaction, associational life, and generalized trust. The outcomes of various collective activities, moreover, are found to be partial, in accord with social capital theory. However, the research highlights a number of shortcomings to the explanatory power of the social capital paradigm, in particular, the importance of human capital for collective action, and also raises important questions about the efficacy of the bottom-up, consensual approach to development in the dominant discourse.

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TABLE OF CONTENTS

Chapter One: Introduction

The subject of this dissertation is community-based urban environmental management (CUEM) in low-income settlements in India, which has been the focus of my academic work at the University of Toronto over the past few years. CUEM, in a developing country context, refers to household- and community-level practices and strategies to improve living conditions, reduce health risks, and gain access to urban services (Douglass et al., 1994). By and large, inhabitants of economically poor settlements live in substandard conditions, often in polluted and degraded environments (Hardoy et al., 2001; Swaminathan, 1995; UNCHS, 1996). Municipal services such as potable water, sewer systems, and garbage collection are generally inadequate or lacking altogether (Douglass, 1992; Gaye and Diallo, 1997; Hardoy et al., 1992; 2001). In a number of slums and squatter settlements throughout the developing world, however, residents have managed to mobilize themselves, autonomously or with the assistance of external actors (e.g., local authorities or nongovernmental organizations), to improve their local environment and gain access to much-needed services (Douglass, 1995; Lee, 1998; Vincentian Missionaries, 1998). The range of community-level environmental activities in developing country cities includes water supply, sanitation, solid waste management, drainage, laneways and other common spaces, waterways and canal cleaning, and urban agriculture and forestry (Lee, 1998; Boonyabancha, 1999; Ramirez, 2005).

CUEM can be characterized as "bottom-up" or participatory development for the reason that the locus of organization, management and benefit resides in the community (Brohman, 1996; Douglass, 1995). Since the 1980s, academics, development practitioners and international development agencies have advocated community-based approaches as an alternative to traditional top-down development models that have failed to meet the basic needs of all segments of society (Brohman, 1996; Friedmann, 1992; Lee, 1998; Mitlin and Thompson, 1995; Douglass, 1992). Bottom-up development has been criticized by some as difficult to replicate and scale up, or as a strategy to legitimize reduced government spending (Guijt and Shaw, 1998). Proponents of community-based development, on the other hand, argue that the approach has empowered groups of people, led to improved services, influenced public policy, and harnessed energies for collective action (Guijt and Shaw, 1998). In my view, CUEM has merit both as a practical approach (e.g., to improve living conditions) and, potentially, as an empowerment strategy (e.g., to increase the voice of the urban poor in the political process). Nevertheless, CUEM is not without limitations, including its localized

nature, and ought not to be considered a panacea for the myriad, large-scale environmental challenges that many cities in developing countries face.

Notwithstanding the increased interest in community-based approaches, comparatively few studies to date have critically examined CUEM in low-income, urban communities. Successful cases are reported from cities such as Pune, India (Hobson, 2000); Karachi, Pakistan (Hasan, 2002); Quezon City, the Philippines (Vincentian Missionaries, 1998); Bangkok, Thailand (Lee, 1998); Tegucigalpa, Honduras (Choguill, 1996); and Ibadan, Nigeria (Enabor et al., 1998). Nonetheless, scholars contend that community-based efforts have oftentimes had mixed results or failed (Mehta, 2004; Dutta, 2002; Beall, 1997). As such, a gap exists in the literature, not only in terms of documentation of many of the initiatives, but also coherent theory of how it works (or does not work). The level of engagement in CUEM is thought to be uneven, across and within cities in the developing world (Douglass, 1995), yet we do not have a good understanding of why. Overall, it would be fair to say that community-based approaches have not achieved the scale or pace to meet urgent human needs or to reverse widespread urban environmental degradation (Douglass, 1995; Mehta, 2004). More evidence is needed, therefore, about the facilitating factors and common barriers, as well as models that may be transferable elsewhere.

1.1 The Urban Indian Context

Aside from the need for greater understanding of CUEM generally, the rationale for my study is based on urbanization trends in India. While still predominantly rural, the country is becoming increasingly urbanized.[1] The proportion of urban dwellers in the country has climbed steadily from 17 % in 1951 to almost 28 % in 2001 (Census of India, 2001; Planning Commission, 2002; Jacquemin, 1999). In the 2001 census, the population of India reached 1.027 billion, of which 285.3 million (27.8 %) were living in urban centres and 741.6 million (72.2 %) in rural areas (Census of India, 2001). Although the level of urbanization in India remains relatively low by international standards, the number of people living in urban areas is substantial – the 285 million Indian urban dwellers exceed the total population of any country

[1] Since the 1961 Indian Census, a settlement is defined as urban when its population exceeds 5,000, its population density is over 400 per hectare (1000 per sq. mile), and over 75% of its male labour force is engaged in non-agricultural work. In addition, settlements that do not fulfill the aforementioned criteria can be classified as urban by census authorities on the basis of other urban characteristics or by means of government notification (Jacquemin, 1999).

in the world, excepting China and the United States (Population Reference Bureau, 2004). For the foreseeable future, India is expected to continue on an urbanization path which, at some point, may accelerate as a result of government liberalization policies, major economic growth, and increasing modernization of agriculture (Jacquemin, 1999). The UN Population Division (2005) forecasts that, by 2030, India's population will swell to 1.4 billion, of which 586 million people or 41.4% of the total population, will reside in urban areas. Thus, in the not-too-distant future, India's already-huge urban population will more than double, requiring enormous efforts to provide housing, jobs, infrastructure and services and, at the same time, ensure the quality of the urban environment.[2] Given the magnitude of human needs in this scenario, CUEM warrants further investigation for its potential contribution to urban development.

According to Government of India estimates, the incidence of urban poverty in the country has decreased markedly over the last several decades. The proportion of urban poor declined from 49.0 % in 1973-74 to 23.6 % in 1999-2000 (Planning Commission, 2002). Nonetheless, government poverty headcounts, which are based on the income equivalent of a minimum food basket consisting primarily of foodgrains, have been criticized on numerous grounds. One major flaw is that a single criterion is utilized to capture the phenomenon of poverty (Satterthwaite, 1997; Kundu and Mahadevia, 2002; Moser, 1998; UN-Habitat, 2003). The conventional economic approach, moreover, does not take into account basic necessities such as housing, water supply and sanitation (Heggade, 1998; Kundu and Mahadevia, 2002). Amongst academics and development practitioners, poverty is increasingly viewed as a multi-dimensional and dynamic process that includes various elements of deprivation in well-being or quality of life (e.g., UN-Habitat, 2003; Wratten, 1995; Moser, 1998; Beall, 1997; Kundu and Mahadevia, 2002). While the Indian Government continues to utilize poverty headcounts, the 10th Five Year Plan (2002-2007) recognizes the multi-faceted dimensions of vulnerability of the poor: housing and infrastructure vulnerability, economic vulnerability, social vulnerability, and personal vulnerability (Planning Commission, 2002). Thus, from the standpoint of broader conceptualizations of poverty, CUEM could help to reduce insecurity or vulnerability associated with lack of access to adequate infrastructure and services.

Although data on slums have been collected in the last few Indian censuses, temporal and spatial trends are not clear due to incomplete data and methodological inconsistencies. From

[2] For further information on urbanization trends in India, see Appendix B.

the 2001 census, 40.6 million persons or 14.2 % of the total urban population of 285 million, lived in slums (Census of India, 2001). Some states have utilized the slum definition from the *Slum Areas (Improvement and Clearance) Act*, 1956, whereas other jurisdictions have adopted different definitions (Planning Commission, 2002). Under the act, a slum is defined as an area where buildings "(a) are in any respect unfit for human habitation; or (b) are by reason of dilapidation, overcrowding, faulty arrangements of streets, lack of ventilation, light or sanitation facilities, or any combination of these factors are detrimental to safety, health or morale" (Sehgal, 1998; 5). The definition, in other words, is a combination of physical factors and more subjective social criteria that are not easily quantifiable. It is widely believed that the census figures under-represent the extent of low-income settlements across the country, owing to non-listing of many slums at the local government level and other reasons (Mitra, 2003; Planning Commission, 2002; UN-Habitat, 2003; Chakraborty, 1995). UN-Habitat, for instance, utilizing a different definition than the Indian government, estimates that slum dwellers represent a much larger 55 % of the urban population in the country (UN-Habitat, 2003).[3]

Given the range of problems that many low-income urban communities in India encounter related to absence of basic amenities and degraded local environments, the topic of CUEM is worth exploring as there would seem to be a pressing need for local residents to cooperate for mutual benefit to improve their living conditions and gain access to municipal services. Furthermore, aside from survival-oriented and quality of life issues, state-society relations are shifting in India with the withdrawal of the state since the early 1990s. Recent government policy calls for communities, NGOs and the market to become more active agents of development in partnership with government (Chandhoke, 2005; Jayal, 2001; Drèze and Sen, 2002). Under this new paradigm of urban governance, the role of government is changing from provider to facilitator. In view of the immense social diversity in India, it is to be expected that the capacity of communities to participate in the development process is variable. Consequently, in the Indian context, it is important to understand the factors at the grassroots- and macro-level that determine whether, and shape how, communities can mobilize

[3] The UN-Habitat definition is based on five characteristics: access to water; access to sanitation; location and structural quality of housing; overcrowding; and security of tenure (UN-Habitat, 2004). For additional information about the national census data on slums and related methodological issues, see Appendix B.

themselves in CUEM, either through self-help efforts or with the assistance of external actors. To that end, my research offers new empirical evidence and analysis of CUEM in urban India.

1.2 Research Questions and Theoretical Approach

My research questions focus on environmental conditions, social capital, and collective action, respectively, in low-income settlements in Delhi:

1) *What are the household- and community-level facilities and services, practices, and problems regarding environmental management in low-income settlements in Delhi (i.e., water supply, sanitation, solid waste management, and use of open space)?*

2) *What is the nature of community-level social capital, that is, social integration and linkage in Woolcock's (1998) conceptualization and, by extension, how predisposed are local residents for collective action generally?*

3) *How effective are collective action efforts to improve environmental conditions in low-income settlements, and to what extent are communities able to overcome typical problems of collective action (e.g., free riding, dealing with conflicts)?*

The theoretical approach utilizes recent social capital theory (Putnam, 1993; 2000; Uphoff, 2000; Woolcock, 1998; 2001) and the longer-standing collective action literature (Olson, 1965; Hardin, 1968; Ostrom; 1990; 1998; 2000; 2001; 2003). In its fairly brief career, the theme of social capital has generated much interest and enthusiasm, not to mention a good deal of controversy. Depending on one's point of view, the proliferation of social capital literature signifies the inherent value of the concept, a useful analytic tool, propagation of quick-fix "solutions" for systemic societal problems, or merely an academic fad (Wall et al., 1998; Ostrom, 2000). Probably the harshest appraisal is leveled by Fine, who considers social capital a "totally chaotic, ambiguous, and general category that can be used as a notional umbrella for almost any purpose" (2001; 155). However, the broadness and flexibility of the social capital construct can also be seen as a virtue. Social capital is best thought of as a collection of concepts (e.g., networks, solidarity, citizen engagement, cooperation, social norms), each of which has been a prominent theme in various disciplines for some time. Thus,

while the constituent concepts are not original, it is as a meta-construct or model linking disparate ideas that social capital is new and significant (Rohe, 2004).

Social capital has been defined as "features of social organization, such as trust, norms, and networks, that can improve the efficiency of society by facilitating coordinated action" (Putnam, 1993; 167). The idea of social capital is deceptively simple – that through the relations people have with one another, they can reap benefits and achieve mutual objectives that cannot be independently attained (Putnam, 1993; 2000). Though social capital has been employed in diverse fields (e.g., economic development, education, health care, natural resource management, democratic governance) (Woolcock, 1998; Stolle, 2003), the topic of CUEM has received limited attention to date. Social capital has relevance to CUEM as a resource potentially available to low-income communities to improve the quality of their environment. Social capital theory may further our understanding of community management in helping to explain, for instance, why some groups and communities are able to organize around environmental issues and others cannot. The concept may reveal why some neighbourhoods can overcome dilemmas of collective action, while others encounter difficulties. A social capital perspective, furthermore, may point to policy interventions to promote CUEM.

1.3 Research Site: Sultanpuri, Delhi

I conducted my fieldwork in a place known as Sultanpuri, a resettlement colony on the northwest fringe of Delhi housing upwards of 100,000 people (Ali, 1998). The colony was developed during the Emergency (1975-77), the most intense period of resettlement in the city's history, when squatters and slumdwellers were relocated *en masse* from the central core to outlying areas. At the time of my fieldwork, Sultanpuri was a project site of "Promoting Linkages for Urban Sustainability" (PLUS), a five-year initiative (1999-2004) that was sponsored by Care India. Though Care India has carried out many rural programs in the country since 1950, PLUS was one of its first urban projects (Care India, n.d.). Under the project, Care India partnered with four NGOs active in Delhi slums: Saahasee, Kislay, CASP and Action India. A semi-autonomous government organization, the National Institute for Urban Affairs (NIUA), joined partway through as the fifth partner. Each of the partners

focused on a different low-income community[4] in Delhi, with the total number of households represented being about 35,000. The Department for International Development (UK) and other agencies provided funding (Care India, n.d.).

The basic premise of the PLUS Project was that the urban poor constitute an essential, yet often untapped, force for improving the quality of life in their households and neighbourhoods, as well as the larger city (Care India, n.d.). In order to bring about fundamental change in the lives of the poor, the PLUS Project attempted to go beyond alleviation of symptoms of poverty status, such as poor-quality housing or inadequate services, to address underlying causation. According to project designers, the root problem of the poor in Delhi is their exclusion from the urban development agenda (Care India, n.d.). As such, the isolation of the urban poor from city-level services, structures and support mechanisms is believe to perpetuate substandard conditions in the slums and squatter settlements. The PLUS Project, therefore, was intended to support community-initiated action at the grassroots, as well as encourage community members to assert their rights as citizens and influence public policy. In the International Institute for Environment and Development (IIED) typology of NGO roles in urban environmental improvement (n.d.), the PLUS Project would be deemed a civil society-driven approach.[5]

The PLUS Project was implemented at Sultanpuri by an Indian NGO called Saahasee Society for Community Empowerment and Transformation,[6] or Saahasee for short. During the fieldwork, Saahasee was, in effect, my gatekeeper to the community, without which I would not have been able to carry out the research. The scope of the PLUS Project in Sultanpuri was predominantly environmental infrastructure and services and community management. Initiatives were taken up in four different sectors: water supply, sanitation, solid waste management, and park planning. Over the lifetime of the project, Saahasee initiated programs in other areas such as skill training, livelihoods, health and micro-credit; however, my focus in the thesis is solely on the environment-related activities at Sultanpuri.

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[4] In addition to Sultanpuri, the PLUS Project sites and NGO partners were Dakshinpuri (Action India), Govindpuri (CASP), Vikaspuri (Kislay), and New Sanjay Amar Colony (NIUA).

[5] Aside from the civil society alternative, the IIED (n.d.) framework recognizes market-, welfare- and claim-making-on-the-state-oriented approaches.

[6] Prior to 2003, Saahasee was called Sharan Society for Service to Urban Poverty; however, I will use their new name throughout. Saahasee is a national NGO, registered in 1981 and based in Delhi. The organization has been active in a number of low-income areas of Delhi, including the resettlement colonies of Sultanpuri and Mangolpuri. Saahasee's mandate is to improve the social and economic conditions of the urban poor through a range of community-based programs in micro-finance, health, education, vocational training and environment.

1.4 Organization of Thesis

The dissertation is organized into three main parts. The first part presents the theoretical perspectives that inform the later empirical chapters, and consists of Chapters Two and Three. Chapter Two is concerned with social capital, particularly as the concept applies to the urban poor in developing countries. The chapter covers the different constructions of social capital and emphasizes the work of Putnam (1993; 2000), Uphoff (2000) and Woolcock (1998; 2000; 2001) as the foundation of my research. In addition, the chapter clarifies the sometimes confusing terminology, discusses opportunities and constraints within the urban environment generally for social relations, and identifies several key debates in the literature, including whether or not external actors can intentionally promote social capital in communities. Chapter Three is devoted to collective action theory with, again, a focus on the community level. The chapter covers the seminal contributions of Olson (1965), Hardin (1968; 1998), and Ostrom (1990; 1998; 2000), the alternative perspective of critical commons scholars (e.g., Mosse, 1997), and the conceptual framework of CUEM that Douglass (1995) proposes.

The second part of the dissertation, which comprises Chapters Four and Five, is about the Indian scenario and provides the broad context for my study. Chapter Four reviews the literature on Indian society and the state, including fundamental social structures (e.g., caste, class, gender and religion), civil society, and state-society relations. The recent paradigm shift in urban governance, which has relevance for my particular case, is summarized. In addition, Chapter Four looks at the limited, albeit illuminating, body of empirical work on social capital in India. Chapter Five focuses on the mega-city of Delhi. The chapter outlines the administrative set-up, population base, typology of settlements, and public provision of infrastructure and services. Chapter Five also explains the history of government resettlement policy in the city.

The third and final part of the dissertation presents the empirical research in Sultanpuri. Chapter Six is devoted to methodology, and explains the case study approach and mixed methods that I utilized in the fieldwork. Chapter Seven is a brief introduction to the study community. Chapters Eight, Nine and Ten relate thematically to my three research questions above. As such, Chapter Eight examines environmental conditions in the community in terms of water supply, sanitation, solid waste, and municipal parks. Chapter Nine investigates the nature of social capital in Sultanpuri, both customary structures and new forms of social organization that were created through the PLUS Project. Chapter Ten explains the collective

efforts in the community over several years, as a result of the PLUS Project, to improve the quality of the local environment and gain access to improved municipal services. Lastly, Chapter Eleven gives the conclusions, wherein I recapitulate my findings for the three research questions and reflect on methodology. As well, I consider the wider implications of my study, notably, the value of social capital as an analytical tool to understand community dynamics and the utility of bottom-up development strategies predicated on building social capital in low-income urban settlements, as was attempted in Sultanpuri.

Chapter Two: Social Capital Theory

Social capital theory continues to evolve and, at this stage, academics do not agree on the basic meaning of the concept. For the purpose of my research, I define social capital as "features of social organization, such as trust, norms, and networks, that facilitate cooperative behaviour and collective action," which is similar to the definition that Putnam (1993) has popularized.[1] My definition, like Putnam's, emphasizes social capital as a collective asset or resource (i..e., benefits are available to everyone in the group), as opposed to an alternative school in the literature that focuses on individual access to resources through social connections (e.g., Burt, 1992; Portes, 1998; Lin, 2001). While Putnam's conceptualization acknowledges individual-level benefits, the primary concern is the sources and processes that generate and maintain the joint asset (Lin, 2001). The individual- and group-level formulations of social capital are related (Grootaert et al., 2004; Lin, 2001); nonetheless, the literature has essentially split along these lines (Portes and Landolt, 2000). In my research, I utilize a Putnam-like definition because of the importance of cooperation and collective action in CUEM.

This chapter reviews the literature on social capital theory and its application to the urban poor in developing countries to provide a conceptual foundation for addressing the social capital research question in the empirical chapters. The chapter is organized into seven parts. The first section gives an overview of the different constructions of social capital in the literature. The second and third sections focus on the sources and outcomes of social capital. The fourth section introduces the terminology of community-level social capital. The fifth section describes the various opportunities and constraints that the urban poor face in their social relations. The sixth section examines the issue of constructability of social capital at the community level. The seventh and final section introduces two concepts closely related to social capital, namely, civil society and social cohesion.

2.1 Constructions of Social Capital

Beyond the level at which the benefits of social capital are assessed (i.e., individual or group), the literature reflects diverse interpretations, approaches and methodologies. On the whole, the

[1] Putnam's definition of social capital is: "features of social organization, such as trust, norms, and networks, that can improve the efficiency of society by facilitating coordinated action" (1993; 167). My definition is derived from Putnam's, but omits the part about "improving the efficiency of society" as it suggests that outcomes are always positive, which is not the case.

various constructions of social capital that have emerged fall under five main categories: communitarian, critical, networks, institutional, and integrated[2] (Woolcock and Narayan, 2000; Wakefield and Poland, 2005), all of which provide important insights into this complex notion. As shown in Table 2.1 below, the various conceptualizations differ in terms of which societal actors are under consideration (related to geographic scale), as well as basic premises about the inherent value of social capital, the significance of certain types of social relations, the way in which social capital is formed, and the range of consequences. Each of these perspectives of social capital, moreover, has engendered specific criticisms, several of which are noted in the table. Though not shown in the table, the five constructions could be further distinguished along other parameters, such as the primary mode of analysis utilized by researchers and substantive contributions made (Woolcock and Narayan, 2000).

My research is most closely affiliated with the integrated view of social capital (e.g., Woolcock, 1998; Evans, 1996; Serageldin and Grootaert, 2000; and Krishna, 2003). This conceptualization is integrated in the sense of combining the micro-level perspectives of the networks view (groups, communities) with the macro-level perspectives of the institutional camp (government structures and policies, laws, court systems) (Woolcock and Narayan, 2000). A basic tenet of the integrated view is that social capital exists, in varying degrees, within micro- and macro-level structures and also inheres in the relations between the two domains (Woolcock and Narayan, 2000; Serageldin and Grootaert, 2000). A related premise is that social capital at one level shapes and, is shaped by, social capital at the other level (Woolcock and Narayan, 2000; Serageldin and Grootaert, 2000; Krishna, 2003). Accordingly, in an enabling macro environment, social capital is enhanced at the local level; conversely, negative interaction between the two spheres can hinder the development of social capital within communities (Serageldin and Grootaert, 2000). Social capital at the micro level, in turn, can add legitimacy to, and improve the performance of, government and other macro institutions (Woolcock, 1998; Evans, 1996; Krishna, 2003).

A variant of the broadly defined integrated view is the concept of state-society synergy put forward by Evans (1996), in which social capital at the micro- and macro-scales is

[2] The first four categories of social capital are drawn from Woolcock and Narayan (2000) and Wakefield and Poland (2005); the term "integrated" is my own. Woolcock and Narayan (2000) employ "synergy view" to refer to integrated constructions of social capital, but I refrain from using their term as it confuses with Evan's (1996) phrase "state-society synergy" and Woolcock's (1998) use of "synergy" as a macro-level source of social capital. In addition, I prefer "integrated" to "synergy view" because the former term is less normative and, hence, a more apt descriptor for Woolcock's (1998) framework.

Table 2.1. Five Constructions of Social Capital (SC)

View of SC	Proponent(s)	Actors	Main tenets	Criticisms
Communitarian	Putnam (1993; 1995; 2000)	Community groups Voluntary organizations	• SC is inherently good and results in positive outcomes • SC a resource benefiting society as a whole • Importance of horizontal associations in building SC	• Lack of consideration of negative externalities, power structures, intra-community disparities • Could be used to legitimize state retrenchment
Critical	Bourdieu (1979; 1986)	Individuals Groups	• SC a resource of individuals or groups • SC reinforces existing structures of domation in society • SC is intimately related to cultural (symbolic) and economic capital	• Lack of consideration of positive aspects of SC • Fails to consider potential for social change
Networks view	Burt (1992; 1997; 1998), Portes (1995; 1997; 1998), Portes and Sensenbrenner (1993)	Community groups Entrepreneurs Business groups Information brokers	• SC can have positive or negative outcomes • Importance of horizontal and vertical ties • Community-level SC: intra-community ties (bonding) and inter-community ties (bridging)	• Public goods aspect undervalued, since benefits of groups primarily considered to accrue to members • Overlooks how macro environment shapes, and is shaped by, community-level SC
Institutional	Tendler (1997), North (1990), Knack and Keefer (1995; 1997)	Civil society Political structures Legal institutions Private sector	• Community-level SC and civil society largely a result of macro environment • SC equated with quality of political, legal and economic institutions	• Lacks a community-level component • Transition from weak to strong government structures may take decades; voice and interests of poor can be ignored
Integrated	Evans (1996), Woolcock (1998), Serageldin and Grootaert (2000)	Community groups Civil society Firms Private sector Political structures Legal institutions	• SC exists at micro and macro levels and in relations between the two • State-society synergy: Productive relations between state and civil society can achieve more than each one acting independently	• Attempts to explain too much with too little? • More theorization needed re: conditions under which synergies emerge (or fail to emerge)

Sources: Adapted from Wakefield (2005; 2821); Woolcock and Narayan (2000; 239)

mutually reinforcing. Evans (1996) distinguishes between two forms of synergistic relations: complementarity, which refers to mutually supportive relations between the state and society; and embeddedness, which denotes the ties between citizens and public officials. The achievement of state-society synergy brings about positive-sum outcomes, superior to what the micro- and macro-levels of social capital could achieve on their own. As such, the dominant focus in research from a state-society synergy perspective is on the quality of micro-macro relationships, and strategies for scaling up, to achieve developmental goals (Woolcock and Narayan, 2000).

2.1.1 Woolcock's Social Capital Framework

Notwithstanding the influential contribution of Evans (1996), Woolcock's (1998) formulation of an integrated view of social capital is, arguably, more holistic and differentiated than that of state-society synergy. Woolcock does not *a priori* privilege the nature of state-society ties as does Evans (1996) and Krishna (2003), nor does he emphasize one level of social capital over the other, as in the networks and institutional models. Rather, Woolcock contends that the micro- and macro-components of social capital, as well as relationships between the two, are equally crucial in determining outcomes. Woolcock's (1998) model of social capital incorporates four distinct forms, which he calls Integration (intra-community ties) and Linkage (extra-community ties) at the community level and Synergy (state-society relations) and Organizational Integrity (institutional capacity and credibility) at the macro level. As the core concepts in his framework derive from classic works in the field of sociology,[3] the model is theoretically robust. Although Woolcock's Synergy sounds similar to Evan's state-society synergy, the former is the more neutral, encompassing term. In the ensuing discussion, I utilize Woolcock's terminology of micro- and macro-social capital (henceforth, without capitalization).

Woolcock's (1998) framework, furthermore, is seminal in positing the conditions under which social capital produces divergent outcomes. On the basis of the logic of his framework and empirical evidence, Woolcock argues that optimal development requires all four forms of

[3] According to Woolcock (1998), the concept of integration comes from the ideas of mechanical and organic solidarity from Durkheim (1984 [1893]) and that of *gemeinschaft* (familial and traditional social relations) and *gesellschaft* (weaker ties brought about through an expanding division of labour) from Tönnies (1963 [1887]); linkage is based on the observation of Simmel (1971 [1908]) that economically poor communities needed to create social relations extending beyond their primordial groups in order to prosper over the longer term; and the notion of organizational integrity derives largely from Weber (1968 [1922]; 1981 [1927]).

social capital. Often, though, communities or societies have too much of one type of social capital and not enough of another. For example, at the community level, high integration could enable members to work together cooperatively to achieve common goals; community integration accompanied by lack of linkage, though, could create negative externalities for other communities or society as a whole. Of course, many other permutations and outcomes ensue from Woolcock's framework. The main point that Woolcock (1998) makes is that social capital is *not* an unqualified good; various combinations of micro- and macro-level social capital can produce positive, negative or mixed effects.

For the purpose of my research, Woolcock's model provides the over-arching framework. As my project is first and foremost a community-level study, the micro-level concepts of integration and linkage are central. In addition, I make connections between social capital at the community- and city-scale, though this is secondary. My research utilizes Woolcock's macro-level concepts of organizational integrity and synergy, primarily in reference to the Delhi government bodies responsible for water supply, sanitation, solid waste and municipal parks. Macro-level structures such as the elected government, the rule of law, and the judiciary are not considered. Thus, the vertical component in my research could be characterized as meso-level, rather than macro-level.

2.2 Sources of Social Capital

The literature, for the most part, differentiates between what social capital *is* (i.e., sources) and what social capital *does* (i.e., outcomes) (e.g., Woolcock, 2001; Portes and Landolt, 1996; 2000; Lin, 2001; Krishna, 2000; Narayan and Cassidy, 2001). Social capital, thus understood, represents a potential or capacity within social structures for achieving outcomes, rather than the outcomes themselves. This conceptualization is important in that it avoids the tautology of defining social capital on the basis of its effects (Portes and Landolt, 1996; 2000). The distinction between sources and outcomes of social capital is sometimes expressed in economic terms, such as "stock" and "flow" (e.g., Krishna, 2000). Regarding what social capital is, Uphoff (2000) disaggregates the concept into two basic components: structural and cognitive social capital.[4] The structural component comprises various forms of social organization that foster cooperative behaviour and collective action between individuals

[4] Other theorists make the same distinction, but utilize different terms. For example, Paxton (1999) employs the terminology of objective associations and subjective ties, and Krishna (2000) refers to institutional and relational social capital.

(Uphoff, 2000); it is therefore a subset of the wide array of social relations in which people are enmeshed. Cognitive social capital consists of certain mental constructs, fundamentally pertaining to how we should think about and relate to others, that predispose people to act together effectively (Uphoff, 2000). In this two-component model, both sources of social capital can support cooperative behaviour, albeit through different means (Krishna, 2000).

While it is useful to differentiate between structural and cognitive social capital for conceptual purposes, in real life, however, the two categories are not easily separable. In Uphoff's (2000) model, the structural and cognitive components are complementary; the existence of social capital almost always signifies that both sources are present and mutually reinforcing. Putnam's (1993) idea of "virtuous circles" and "vicious spirals" of social capital, suggesting positive feedback between the structural and cognitive components, fits into Uphoff's conceptualization. Apart from these general propositions, though, understanding of how the structural and cognitive aspects interrelate is limited. A number of scholars have called for more precise specification of relationships between the various components of social capital and further explanation of causal mechanisms, in particular the direction of causation (Torsvik, 2000; Putnam, 2000; Uphoff, 2000; Portes, 1998; 2000).

2.2.1 Networks

In Putnam's definition of social capital, "networks" refers to the structural component of Uphoff's model. Networks, commonly understood as "patterns of social exchange and interaction that persist over time" (Uphoff, 2000; 219), are thought to contribute to social capital in several ways. First of all, the structural component represents the flow of resources (exchange) within and between networks (e.g., information, ideas, social support, material benefits, power or influence) (Lin, 2001; Field, 2003; Paxton, 1999; Grootaert et al., 2004). The overall form of the network (e.g., horizontal/vertical, open/closed, formal/informal, homogeneous/heterogeneous) influences the range of resources that can be potentially accessed, either individually or collectively, to produce outcomes (Lin, 2001; Grootaert et al., 2004). Specific attributes of network form, moreover, are deemed to promote cognitive social capital that can support cooperative behaviour (Coleman, 1988; 1990).

The structural component also embodies roles, rules and procedures, both formal and informal, which are believed to facilitate various functions and activities essential to collective action (e.g., decision-making, resource mobilization and management, communication and

coordination, and conflict resolution) (Uphoff, 2000; Ostrom, 2000). The cognitive component, on its own, may not be enough to enable people to work together (Uphoff, 2000). Networks are viewed as important in shaping social identities (Lin, 2001; Halpern, 2005), which can rationalize cooperative behaviour. In addition, it is argued that networks, as established modes of social interaction, reduce the start-up and transaction costs of collective action (Putnam, 1993; 2000; Ostrom, 2000; Uphoff, 2000).

2.2.2 Cognitive Social Capital

Networks are imbued with cognitive dimensions and thus never neutral (Onyx, 2005). The cognitive category in Uphoff's social capital model includes various kinds of social norms, values, attitudes and beliefs that predispose people to act together. This is what Putnam refers to as the "informal social contract" (1993; 164). The core mental constructs, according to Uphoff (2000), are trust and norms of reciprocity, solidarity, cooperation, generosity and altruism; secondary forms, which support the primary constructs, include norms of honesty, fairness, participation and egalitarianism, as well as ideas pertaining to democratic governance and concern for the future (Uphoff, 2000). The fundamental "other-regarding" orientation of this set of constructs and beliefs is thought to make cooperation more desirable and more productive, as compared to cooperation based on self-interest alone (Uphoff, 2000).

The main emphasis in the social capital literature, reflecting Uphoff's formulation, is on trust and norms of reciprocity, solidarity and cooperation (e.g., Coleman, 1988; Putnam, 1993; 2000; World Bank, 2001; Paxton, 1999; Portes, 1998; Grootaert et al., 2004). Broad agreement exists that the different cognitive dimensions are interrelated and mutually reinforcing (e.g., Uphoff, 2000; Putnam, 1993; 2000; Grootaert et al., 2004), similar to the connection between the structural and cognitive components. Nonetheless, theoretical understanding of which cognitive elements are essential and which are more peripheral, and how the different elements interrelate, is provisional at this stage (Onyx, 2005).

Social norms:

Social norms, a major part of cognitive social capital, are viewed as shared understandings among a group of people about what actions are correct or appropriate and what are incorrect or inappropriate (Coleman, 1990). Norms typically emerge from the externalities of specific behaviours and are purposely initiated or maintained so as to increase the benefits or reduce

the costs of such actions to the group as a whole (Coleman, 1990; Horne, 2001). Norms are of two basic types: prescriptive norms (which encourage a particular behaviour) and proscriptive norms (which discourage a particular behaviour) (Coleman, 1990). Within a given group, different norms can be interconnected in a structure of norms (Coleman, 1990). A norm of cooperation, for instance, may be undergirded by a norm of solidarity, since the latter belief tends to make the former more appealing to group members (Uphoff, 2000).

Most scholars regard group-based sanctions as crucial to upholding norms (Horne, 2001). Group-based sanctions imply a socially defined right of group members to enforce the norm via positive and negative sanctions, which involves costs; the need for group-applied sanctions decreases, though, with individual-level internalization of the norm (Coleman, 1990; Horne, 2001). Communities that have relatively closed structures, smaller group size and longstanding relations are better suited to maintaining norms because personal reputation counts and sanctioning is more effective (Cook and Hardin, 2001; Coleman, 1988; Portes, 1998). In such communities, social pressures and fear of exclusion (shunning or ostracism) generally ensure conformance to norms (Grootaert el al, 2004). In more open social structures, the extent to which people deviate from the norm depends heavily on its enforcement (Horne, 2001). Strong norms serve to informally regulate or control behaviour of individuals for the benefit of the group, thereby reducing opportunism and malfeasance (Coleman, 1990; Horne, 2001; Grootaert el al, 2004; Cook, 2001).

Putnam (1993; 2000) contends that generalized reciprocity is the critical norm in the production of social capital. Generalized reciprocity can be defined as an ongoing relationship of exchange between individuals that at a given time may be unbalanced, yet involves some level of confidence that the exchange will even out over time (Putnam, 2000). It differs from specific reciprocity, which entails simultaneous exchange of items of similar value[5] (Putnam, 1993). The norm of generalized reciprocity depends on expectations, obligations and trust; as Coleman explains: "If *A* does something for *B* and trusts *B* to reciprocate in the future, this establishes an expectation in *A* and an obligation on the part of *B*" (1988; S102). In a system of generalized reciprocity, people are interconnected, doing things for one another in give-and-take fashion. Although generalized reciprocity often involves people who know one another (e.g., family members, friends or co-workers), the norm can be extended to unknown others

[5] Specific or balanced reciprocity takes the form of "I'll do this for you if you do that for me" (Putnam, 2000; 20). The exchange of gifts on a holiday is a case of specific reciprocity.

(e.g., the Golden Rule) (Putnam, 1993; 2000). In Putnam's (1993; 2000) view, generalized reciprocity reduces the transaction costs of social interaction and facilitates cooperation.[6] The motivation underlying generalized reciprocity is usually a mix of "short-term altruism and long-term self-interest" (Putnam, 1993; 172). Frequent contact between people (e.g., in dense networks) is thought to promote development of generalized reciprocity (Putnam, 2000).

Trust:

Whereas the various social norms highlighted by Uphoff (2000) are generally conceived of as contributing to social capital (i.e., sources), the role of trust is controversial. For many scholars, trust is an essential ingredient of social capital (e.g., Coleman, 1988; Putnam, 1993; 2000; Fukuyama, 1995; Krishna, 2000; Uphoff, 2000; Paxton, 1999; Portes, 1998; Narayan and Cassidy, 2001; Murphy, 2002). Fukuyama, for instance, defines social capital as "a capability that arises from the prevalence of trust in a society" (1995; 26). To Fukuyama (1995), trust is the very foundation of all social organization and civilization itself. More commonly, though, trust is discussed in the literature as an entity that, along with networks and norms, simply predisposes individuals to act together cooperatively. Accordingly, Coleman (1988) and Putnam (1993; 2000) contend that trust is inherent to generalized reciprocity, an important source of social capital. Putnam (1993; 2000) considers trust a social "lubricant" that, like generalized reciprocity, enhances cooperation through decreased social transaction costs. Other theorists, however, argue that trust is better understood as a by-product or manifestation of social capital (e.g., Woolcock, 2001; Schuller, 2001).

The social capital literature emphasizes two different forms of trust in the generation of social capital: particularized trust and generalized trust (e.g., Putnam, 1993; 2000; Paxton, 1999; Field, 2003). Particularized trust (also known as personal, grounded or "thick" trust) is trust in specific individuals whom we know well (Field, 2003; Murphy, 2002). This type of trust is relational, characteristically embedded in families, close friendships and dense networks where knowledge of others is acquired through face-to-face contact, observation and shared experience over time (Cook and Hardin, 2001; Field, 2003; Murphy, 2002).

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[6] Putnam does not elaborate on how or why generalized reciprocity, which generates individual-level benefits, would translate into a form of social capital that produces group-level gains; however, it could be that, in a system of generalized reciprocity, the greater degree of connectedness among people and culture of give-and-take predisposes people to acting together as a collective.

Particularized trust is labour-intensive to construct, yet tends to be low risk because it is rooted in the trustworthiness of others (Paxton, 1999; Murphy, 2002).

In contrast, generalized trust (sometimes called "thin" trust) is trust in those whom we know only superficially or not at all. Generalized trust is more abstract and diffuse, encompassing individuals, groups and formal institutions (Field, 2003; Paxton, 1999; Murphy, 2002). The basis for generalized trust is varied, including ascription (i.e., extension of trust in specific individuals to all similar individuals, such as those in a group), goodwill towards strangers (e.g., belief in the goodness of people), and confidence in the integrity of macro-institutions (Field, 2003; Murphy, 2002). Putnam (1993; 2000) believes that generalized trust between citizens (which he terms "social trust"[7]), in extending the range of trust beyond personal circles, can be productive for development. The more trust that exists within a community, the easier it is to cooperate (Putnam, 1993). However, since generalized trust is based on less awareness of the person or entity being trusted, it involves a higher level of risk (Paxton, 1999). As such, Putnam (2000) cautions that generalized trust is a community asset only when warranted, which depends on the trustworthiness of others. In an environment where generalized trust is not justified, particularized trust and mistrust of strangers may be prudent (Field, 2003; Cook and Hardin, 2001).

2.3 Outcomes of Social Capital

Turning now to what social capital *does*, the bulk of the research to date has focused on the positive consequences at the community- and societal level (e.g., Coleman, 1988; 1990; Putnam, 1993; Evans, 1996; Schusterman and Hardoy, 1997; Narayan and Pritchett, 1999; Krishna, 2002). However, Portes and Landolt (1996) and Portes (1998), among others, have disputed the essentially optimistic interpretation of the concept in the literature, arguing that social capital has numerous "downsides" (i.e., outcomes) that have been largely overlooked. Putnam's seminal Italian study (1993), especially, has been criticized for its one-sided portrayal of social capital (e.g., Edwards and Foley, 1998; Portes and Landolt, 1996; Portes, 1998). Portes (1998) contends that, because the group-level benefit that social capital produces is defined by the group, that benefit may or may not be positive for society as a whole (e.g.,

[7] Putnam (1993; 2000) uses the term "social trust" to denote trust between citizens, which does not include trust in government and other institutions.

mafia, cartels). In certain groups, the strong internal ties that profit members often serve to exclude outsiders, such as when people face entry barriers to ethnic-dominated occupations (Portes and Landolt, 1996). Furthermore, the collective good in such groups can be achieved at the expense of harm to individual members (e.g., onerous obligations, pressures to conform, stifling of personal initiative) (Portes and Landolt, 1996; Portes, 1998).

Following upon this general critique of social capital inquiry, a number of theorists now advocate a more balanced view of the concept, i.e., social capital can produce "good" and "bad" outcomes, depending on how groups use it (e.g., Collier, 1998; Onyx, 2005). In this regard, social capital has been compared to economic and physical capital (Collier, 1998). Even Putnam, in his more recent work (2000; 2002), concedes that social capital can have adverse consequences. Nonetheless, while the darker side of social capital is more widely acknowledged at a conceptual level, in practice the positive effects are still emphasized.

2.3.1 Private, club and public goods

Social capital can produce benefits or outcomes, sometimes referred to as "goods," at different levels of social structures: at the individual, group, community, and societal levels (Paxton, 1999; Lin, 2001; Putnam, 2000; Halpern, 2005). Since the social capital literature is not entirely consistent on terminology used to capture goods at the various levels, I will explain what I mean by several terms. Private goods are individual-level goods, that is, benefits generated through a person's social relations that are used only by that person (e.g., getting a job through a personal contact) (Paxton, 1999). Semi-public or club goods, on the other hand, are collective benefits available to all members within a given group or community, but which are not accessible to outsiders (e.g., business efficiency in the case of Coleman's diamond merchants) (Paxton, 1999). This class of goods is obtainable by any group member regardless of whether or not that person assisted in its production, which creates a potential problem of free-riding. Hence, the social capital of the group (e.g., trust, norms, sanctions, authority and other structural aspects) is pivotal in motivating individuals to contribute to, and thereby sustain, the common good (Lin, 2001).

Social capital can also generate public goods, which are effects at the societal level that usually occur as externalities, or by-products, of social capital at a lower level of the social structure (at the group or community level) (Paxton, 1999; Putnam, 2000). A high degree of social capital within a particular group is not always beneficial for wider society (Paxton,

1999). For example, the social capital of a violent urban gang produces a negative externality in the form of public insecurity and fear. Reflective of the public goods aspect of social capital, Field (2003) characterizes social networks as productive (generating positive outcomes for members as well as positive externalities for wider society) or perverse (benefiting members but having negative impacts on society). Similarly, Putnam (2002) distinguishes between groups that are inward-looking (primarily concerned with advancing their particularistic or club goods) and those that are outward-looking (altruistic, or oriented towards the public good).

2.4 Community-level Social Capital: Bonding, Bridging and Linking Relations

The concepts of bonding, bridging and linking social capital have proven useful in characterizing the multiple dimensions of social identities and relations at the community level (e.g., Gittell and Vidal, 1998; Putnam, 2000; Grant, 2001; Levitte, 2003, Wakefield and Poland, 2004). The bonding and bridging terms, first introduced by Gittell and Vidal (1998), are similar in meaning to Granovetter's (1973; 1985) strong and weak ties, and can also be understood as a fuller specification of Woolcock's (1998) concept of integration. Linking social capital likely derives from the term "linkage" in Woolcock's (1998) framework. Discussions of bonding, bridging and linking social capital emphasize that each form is useful for meeting different needs and has particular advantages and disadvantages (Woolcock, 2001; Field, 2003; Halpern, 2005). As my research utilizes the community-level terms extensively, I will briefly review how each concept has been distinguished in the literature.

Bonding social capital refers to strong, dense ties between people who know each other well, such as family members, close friends, neighbours, and members of primary groups (Gittel and Vidal, 1998; Woolcock and Narayan, 2000; World Bank, 2001; Wakefield and Poland, 2004). Bonding connects individuals who are similar in terms of socio-economic position and demographic characteristics; groups defined by these relations thus have a high degree of homogeneity (Grootaert et al., 2004; World Bank, 2001; Putnam, 2002; Field, 2003). Multiple roles of bonding social capital are recognized in the literature: creation of shared identities and personal reputation; development of local reciprocity and particularized trust; and provision of emotional closeness, social support and crisis aid (Putnam, 2000; Murphy, 2002; Gittell and Vidal, 1998). Such ties engender a high level of solidarity within the group structure, which can effectively mobilize individuals and resources around a common purpose

(Narayan, 2001; Grant, 2001; Putnam, 2000). Bonding social capital (e.g., family structures) is also considered a foundation from which to establish bridging and linking ties to other groups (Levitte, 2002; Halpern, 2005).

The numerous positive functions of bonding notwithstanding, most discussions also draw attention to its potential negative aspects. The various downsides of social capital noted by Portes and Landolt (1996) and Portes (1998) (i.e., harm to individuals within the group, exclusion of outsiders, and other negative externalities) are generally associated with bonding social capital (e.g., Putnam, 2000; Field, 2003; Wakefield and Poland, 2004). The most perverse (anti-social) outcomes of social capital are attributed to bonding taken to extremes, especially in the absence of bridging relations (Putnam, 2000; 2002; Field, 2003).

Bridging social capital, on the other hand, implies looser ties between people who are not alike demographically, but have broadly similar economic status and power (Putnam, 2000; Woolcock, 2001; World Bank, 2001). Bridging, in this sense, is a metaphor for horizontal connections that span different social groups or communities (Woolcock, 2001). Whereas bonding social capital is restrictive to outsiders, bridging ties are inclusive, cutting across ethnicity, caste, race, culture and other social cleavages (Narayan, 1999; Grant, 2001; Wakefield and Poland, 2004). Bridging relations typically include casual friends, work colleagues, and members of secondary associations (Woolcock, 2001; Putnam, 2000). The openness towards different types of people that is characteristic of this form of social capital is thought to reflect generalized trust (Murphy, 2002). In bringing together individuals who are not alike, bridging social capital tends to inculcate broader identities and more generalized forms of reciprocity than occurs through bonding relations (Putnam, 2000; Field, 2003). The main utility of bridging ties is access to a larger pool of resources, information and opportunities than is available within the group (Gittell and Vidal, 1998; Putnam, 2000; Levitte, 2003).

In contrast to bonding social capital, bridging is equated with positive outcomes and low potential for negative externalities (Putnam, 2000; 2002; Field, 2003). As Putnam puts it, bonding social capital is useful for "getting by," but bridging social capital is crucial for "getting ahead" (2000; 23). For Putnam, "getting ahead" means groups and communities leveraging their more extensive social relations to achieve collective objectives such as economic development. Negative externalities are assumed to be unlikely because of the moderating influence of cross-cutting ties (Putnam, 2000; 2002; Field, 2003). Bridging social

capital may have limitations, however, such as a lack of resources in some groups with which to exchange (Wakefield and Poland, 2004) or a problem of resource redundancy since, by definition, the various groups have more or less equivalent economic position and power.

The third category of community-level social capital consists of linking ties between groups and people in positions of authority or influence (Woolcock, 2001; World Bank, 2001; Grootaert et al., 2004). Whereas bonding and bridging refer to basically horizontal relationships, linking social capital represents the vertical dimension (Woolcock, 2001; Halpern, 2005). Linking ties may include civil society organizations (NGOs, voluntary groups), government agencies (service providers, the police), representatives of the public (elected politicians, political parties), and the private sector (banks, employers) (Grant, 2001; World Bank, 2001). This form of social capital is valuable in terms of increased access to key resources from formal institutions outside the community (e.g., financial and technical support, capacity-building, and increased access to formal decision-making processes) (Narayan, 2000; Woolcock, 2001; Levitte, 2003; World Bank, 2001; Field, 2003; Grootaert et al., 2004).

Proponents of social capital, such as the World Bank, maintain that linking relations can encapsulate ideas of power and resource differentials in society, not only between communities and the state but also between communities and non-state actors. According to this view, linking social capital is deemed essential for the well-being and long-term development of poor and marginalized groups (World Bank, 2001; Woolcock; 2001; Halpern, 2005). The literature, generally speaking, equates linking social capital with positive outcomes for communities. The adequacy of the social capital concept to address issues of power and conflict is contested, however. Fine (2001) and Harriss (2001) argue that most accounts of social capital neglect the historical-political context and implicitly accept existing power structures. Harriss (2001), moreover, suggests that the overriding emphasis in social capital literature on cooperation and privileging of associational life (as in Putnam's conceptualization) obscures the potentially constructive roles that political action and conflict can play in social change. My own view is that the social capital framework does not preclude consideration of power and resource differentials; the concept of linking social capital can be used to explain such asymmetries as well as sharing of power and resources.

Different combinations of the three types of community-level social capital are thought to produce a range of outcomes (Woolcock, 2001; Field, 2003), paralleling the argument made about the micro- and macro-forms of social capital in Woolcock's (1998) integrated model.

Once again, more community-level social capital is not necessarily better; over-reliance on bonding or bridging, for instance, can be detrimental because benefits are confined to one type of social capital at the expense of the other (Halpern, 2005). Similar also to Woolcock's model, the conceptualization of community-level social capital is dynamic rather than static. The optimal combination of bonding, bridging and linking social capital can vary over time as the needs and priorities of the community evolves or as the macro-environment itself changes (Woolcock, 1998; 2001).

2.5 Social Capital and the Urban Poor

Social capital is widely regarded as a potential asset of the poor in developing societies – in urban as well as rural communities (Collier, 1998; Douglass, 1998; Uphoff, 2000; Woolcock, 1998; 2000; 2001; Grant, 2001; Grootaert, 2001; Krishna, 2002; Phillips, 2002; Das et al., 2003). It is argued that social capital has particular importance for the poor in that they are less able to draw upon other forms of capital (e.g., human and financial capital) (Putnam, 2000). Various studies have established that social capital can produce benefits at the individual- and community level in low-income urban communities. For instance, informal networks based on inter-household reciprocity provide a crucial support system for coping with daily adversity and crisis events (Moser, 1996; Neuhouser, 1995). Other research demonstrates that individuals utilize information obtained through personal networks to facilitate economic mobility in the urban environment (e.g., Das et al., 2003; Mitra, 2003). Case studies have shown, furthermore, that low-income urban communities in different contexts can act cohesively to achieve mutual objectives such as accessing land for housing, resisting eviction, and mobilizing for municipal infrastructure and services (e.g., Grant, 2001; Neuhouser, 1995).

The nature of social relations among the urban poor is not predetermined, however. Horizontal social structures in low-income settlements, which reflect bonding relations, are characterized in the literature in divergent ways. Some communities have experienced a disintegration of the local social fabric, giving rise to a range of problems, whereas others have been able to maintain strong internal ties and a high level of solidarity (Meikle, 2002). Other communities have rifts along gender, age, caste, economic or ethnic lines that reinforce inequalities and discrimination (Mitlin, 1999; Guijt and Shah, 1998). Apart from the level of internal cohesion, low-income settlements are often characterized as disconnected from wider society (Meikle, 2002), implying a lack of bridging and linking social capital. Woolcock

(2000) contends that the poor (urban and rural) generally have abundant bonding social capital, some bridging social capital, and little or no linking social capital.

Vertical relations between low-income communities and non-poor groups, formal institutions and the state, are also portrayed in variable terms. Patterns of clientelistic relations between the urban poor and politicians, involving exchange of votes for community improvements, are well-documented in the literature (Mitlin, 1999; 2001; Philips, 2002; Centre For Civil Society, 2003). Such relations, although recognized as a survival strategy of the poor, are also viewed as dependency-creating (van der Linden, 1997; Mitlin, 2001). Exploitative relations are also common with other actors (e.g., government officials, employers, moneylenders, gangsters, drug barons) (Phillips, 2002). Other studies emphasize the positive effects of linking relations, especially those involving supportive civil society actors such as NGOs (e.g., Grant, 2001; Lee, 1998; Vincentian Missionaries, 1998).

2.5.1 Opportunities and Constraints for Social Capital

Philips (2002) contends that the urban environment presents opportunities as well as constraints for the social capital of the poor. Opportunities are afforded through the diversity of social networks in urban areas, which encompass rural linkages, groups based on kin and place of origin, and urban-based networks. Urban-based networks in themselves are multi-faceted, formed around local or group-defined concerns in addition to broader issues such as labour, class or politics (Philips, 2002). Crosscutting issues, where they exist, can provide avenues for developing bridging and linking relations. Urban areas, moreover, provide a "rationale" for the poor population to form social capital in the sense that association and cooperation can have major benefits. Social organization can be advantageous to the poor in terms of the range of resources potentially available in cities to improve the quality of their lives (e.g., jobs, health care, education), the need to act collectively to secure basic infrastructure and services, and the informational requirements of a complex environment (Philips, 2002).

Furthermore, urban areas are viewed as opportunities for the poor in the sense of transformation of social identities and relations. This process is evident in Jellinek's (1991) ethnography of a Jakarta kampung, which depicts structural change in the social networks of slum dwellers as shifting away from village connections and urban kinship ties to greater reliance on neighbourhood-based relations. The re-shaping of social structures in urban areas

is thought to provide greater inclusion for some groups and exclusion for others (Phillips, 2002). Women and lower castes, for example, may experience less oppressive social identities and greater freedom in the urban environment; however, groups such as children and the elderly may become more vulnerable where traditional support structures are lacking (Philips, 2002).

Regarding barriers to social capital formation, networks are often considered less robust in urban areas, as compared to the rural context, due to factors such as greater population heterogeneity and mobility (Douglass, 1992; Radoki, 2002; Beall, 2002; Das et al., 2003). Many cities are melting pots and, apart from ethnic enclaves, neighbourhoods and communities are usually a juxtaposition of people who do not share a common history and identity. The general dispersion of people who are similar demographically can make bonding social capital, which is contingent on strong, dense ties, more difficult to create and sustain. At any given time, moreover, a certain proportion of the urban population is in flux - recent rural-to-urban migrants, residents in newly developed settlements, and established urban dwellers that relocate within the city – and likely to find themselves separated from pre-existing social structures (Phillips, 2002). In low-income urban communities, norms of reciprocity can be fragile; Moser (1996) found that economic difficulties compelled some households to rely more heavily on reciprocal relations, while others had to withdraw because they could no longer contribute. In situations where the urban poor are enmeshed in exploitative vertical relations, attempts to construct more beneficial forms of social capital can be resisted by powerful vested interests (Phillips, 2002; Moser and Holland, 1997).

Trust and social norms tend to operate differently in urban centres, as compared to smaller communities (rural areas and small towns), which has implications for social capital formation. Generalized trust, which Putnam (1993; 2000) considers a "social lubricant," may not be abundant in urban areas. Putnam (2000) contends that generalized trust is usually not warranted in urban areas; in this milieu, the trustworthiness of people cannot be assumed and the environment can be risky. People are unlikely to cooperate with others if they think they will be exploited, and are more likely to maintain particularized trust (Field, 2003). Generalized trust is also hindered by social inequality (Boix and Posner, 1998), which is often more pronounced in large cities. A lack of generalized trust in urban areas, therefore, would tend to constrain social capital formation, especially bridging and linking relations.

Social norms, which are thought to work best in smaller communities made up of longstanding relations, are also apt to be less robust in urban areas because of the more transient population, increased network complexity, and reduced effectiveness of sanctions and reputation (Cook and Hardin, 2001). The difficulty in maintaining norms is part of the reason why the urban environment is transformative for social relations. At the same time, because social norms are less influential in urban areas, trust and trustworthiness become more important in social capital formation (Cook and Hardin, 2001). However, as noted above, generalized trust can be problematic in the urban environment.

Urban areas are often unsafe, which can also hamper social capital development (UN-Habitat, 2003; McIlwaine and Moser, 2001; Moser and Holland, 1997; Moser, 1996; 2004; Putnam, 2000). Although not a universal problem in low-income settlements (UN-Habitat, 2003), crime and violence are features of social life in the study community. The social capital literature posits a strong inverse relationship between the level of crime and violence and the stock of social capital in the community[8] (Putnam, 2000; Field, 2003; UN-Habitat, 2003; Snoxell et al., 2006), with social capital regarded as both a causal and outcome variable.[9] In addition to individual impacts, crime and violence produce community-level effects that have ramifications for social capital, notably generalized insecurity and fear, increased mistrust, decreased social interaction and cohesion; and reduced commitment to the area (Moser, 2004; Moser and Holland, 1997; UN-Habitat, 1996; 2003). Drug and alcohol abuse, also relevant to the study community, are also linked to the breakdown of social capital (Moser and Holland, 1997). Social capital is believed to deter criminal and undesirable behaviour in communities through strong networks that promote pro-social norms and values, instill a sense of status and esteem (especially among youth), and informally monitor and sanction undesirable behaviour[10] (Putnam, 2000; Field, 2003; Halpern, 2005).

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[8] In Putnam's words: "Higher levels of social capital, all else being equal, translate into lower levels of crime" (2000; 307).

[9] Social capital is viewed as an important, though partial, explanation of the level of crime and violence in communities. Most discussions of crime and violence acknowledge its complex, multi-level causation, including: individual and family factors (personality traits, risk behaviours such as alcohol and drug abuse, household structure, parenting); community-level dimensions (community composition, poverty, unemployment, "oppositional" culture, norms of self-interested behaviour, perceptions of police and judiciary; insecure tenure, overcrowding, housing and urban design, lack of social amenities, social networks and social capital); and macro-level factors (income inequality, social inequality and discrimination) (Field, 2003; Halpern, 2005; Moser, 2004; UN-Habitat, 1996; 2003). As such, the popular belief that poverty is the root of crime is not borne out in the academic literature (Halpern, 2005).

[10] Sanctioning here refers to active community intervention, not in the sense of interceding in serious crimes, but in discouraging the "precursors" of crime before behaviours get out of control, especially in regards to youth, e.g.,

2.5.2 Community-Based Organizations

The literature on low-income urban communities emphasizes the important role that community-based organizations (CBOs) can play in collective action and bottom-up development. CBOs, also known as grassroots organizations, residents' associations, neighbourhood committees and self-help groups, are active in many urban settlements in developing societies (Mitlin, 2001; UN-Habitat, 2003). CBOs are of two basic types: organizations that represent the entire community and focus on community-wide issues, and those that represent specific groups within the community and pursue group-defined objectives (UN-Habitat, 2003). Both types can emerge endogenously (e.g., through kinship bonds, ethnic groups, informal networks) or exogenously (e.g., through the intervention of NGOs, religious organizations, government agencies) (Mitlin, 2001; UN-Habitat, 2003). Research conducted in different countries has shown that community organizing is often gendered, with women involved in day-to-day management of CBOs and men assuming leadership roles (Moser, 1996).

CBOs are frequently regarded as positive forms of social capital with no major downsides; however, this perception not universal. As horizontal social structures, CBOs are thought to encourage participation and cooperation since benefits are supposedly shared (Grootaert, 2001). Grassroots organizations, moreover, are considered a valuable form of social capital in so far as these structures facilitate activities essential to collective action (i.e., decision-making, resource management and mobilization, communication, and conflict resolution) (Uphoff, 2000). Although CBOs are often viewed as the optimal community structure for collective action, some research suggests that informal networks can effectively fulfill this role as well. In Neuhouser's (1995) study of a favela in Recife, Brazil, for instance, local women were able to mobilize collective campaigns through their informal exchange networks to gain access to land, water supply and electricity. CBOs are not always viewed as beneficial or benign for the communities they represent, however; grassroots organizations can have self-serving leaders, inequitable power sharing, undemocratic processes, lack of representation from all segments of the community, and low rates of participation (Moser, 1996; Cleaver, 1999; Mitlin, 2001; UN-Habitat, 2003).

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skipping school, taking drugs, congregating in gangs, showing disregard for public property (Field, 2003; Halpern, 2005).

Another debate concerns whether CBOs are necessarily limited to instrumental objectives revolving around immediate needs (e.g., tenure security, infrastructure and services) or capable in some situations of achieving transformative goals (e.g., changing power differentials or state allocation of resources). Many urban CBOs in developing countries appear to focus on short-term goals of poverty alleviation as opposed to longer-term strategies aimed at poverty reduction (Mitlin, 2001). It is suggested that CBOs, in isolation, cannot effectively challenge the status quo because of their embeddedness in broader structures. From this standpoint, policy change is more likely to occur as a result of CBOs federating or scaling up in order to adopt a sustained advocacy approach (Beall and Kanji, 1999; Mitlin, 2001; Wakefield and Poland, 2004).

2.6 Constructability of Community-Level Social Capital

Due to its public goods dimension, social capital is commonly considered under-produced and generated for the most part as a by-product of social and economic activities (Putnam, 1993; Ostrom, 2000; Grootaert, 2001). The extent to which social capital can be intentionally developed is a point of debate in the academic literature. The pessimistic view, as espoused by Putnam (1993) and Fukuyama (1995), maintains that social capital is an historical-cultural endowment – essentially a fixed asset that can accumulate only very gradually. Putnam (1993), for example, regards the rich social capital of northern Italy as a legacy of predominantly horizontal social and political relations that were cultivated over a thousand years or longer. By the same token, the traditional, more vertical social structures of southern Italy have bequeathed the region with meagre levels of social capital. Even when macro-level institutions do change, as occurred under regional government reform in Italy, Putnam (1993) argues that social capital-poor areas remain blighted due to deeply ingrained social norms that impede cooperative behaviour (e.g., shirking or exploitation).

On the other hand, a number of theorists such as Krishna (2000; 2002), Uphoff (2000), Ostrom (1996), Evans (1996), Grootaert (2001) and Halpern (2005) refute the thesis of historical determinism and contend that social capital can be purposively created. This camp asserts that both primary components of social capital (structural and cognitive) are constructible, even within a relatively short time span (Uphoff, 2000; Krishna, 2000; Evans, 1996). Optimism about social capital formation is, at times, unbounded, as in Krishna's bold claim that "citizens in *all* parts of the world can act collectively in a coordinated and effective

manner" (italics added) (2002; 2). The conceptualization of social capital as a resource for achieving social and economic development, potentially constructible in every society and community, informs efforts to actively promote its creation. The World Bank has embraced this view, urging governments and donor agencies to invest in social capital (Harriss, 2001). Beyond the World Bank, the idea of building social capital has garnered widespread attention, particularly in the US, Canada, Britain, other European Union countries, and Australia (Putnam, 2000; 2002; Hooghe and Stolle, 2003; Halpern, 2005; Onyx, 2005).

The literature contains a number of success stories where social capital was deliberately created or built up at the community level as a result of top-down (institutional) and state-society synergy approaches. A good example of institutional development of community-level social capital is Tendler's (1997) study of government reform in the northeast Brazilian state of Ceara. In Ceara, where mistrust in government workers had been longstanding and pervasive, the state government was able to implement an effective preventative health care program through investing in new, collaborative relations between communities and government health agents. Central to the government strategy was a positive media campaign at the outset that instilled a sense of duty among health agents and also challenged preconceived attitudes of community members. The subsequent commitment demonstrated by health agents in the various communities, in turn, increased local trust and willingness to work together. In fairly short order, the Ceara government managed to build structural social capital (networks of health agents and local people) and cognitive social capital (trust and norms of cooperation), which were previously lacking.

The evidence is also compelling that community-level social capital can emerge through state-society synergy, the positive-sum process whereby the state and society provide complementary inputs and the state is embedded within society (Evans, 1996). Case studies from various contexts, including irrigation management in Taiwan (Lam, 1996), low-cost sewerage provision in Brazilian cities (Ostrom, 1996), and civil society in rural Mexico (Fox, 1996), support the state-society synergy model. Evans (1996) asserts that synergy is attainable in most developing countries, on a time scale of years. He does not view pre-existing levels of community-level social capital in general as a limiting factor, arguing that stocks were not exceptional in the Taiwanese and other cases. More important, Evans believes, is the functioning of the state; robust, competent institutions that identify with, and endeavor to engage, citizens are best able to foster social capital at the community level. In societies that

have a high degree of inequality or ineffectual public institutions, achieving synergy is more difficult and takes longer (decades or generations); nonetheless, even under unfavorable conditions, synergy can be feasible in the near term (e.g., alliances with "reformists" in the state bureaucracy, institutional reorganization) (Evans, 1996).

2.6.1 Constructing Social Capital from the Bottom Up

More relevant to my research, though, is whether social capital can be directly promoted at the grassroots, as was attempted in study community. Bottom-up approaches potentially involve building or reinforcing bonding, bridging and linking relations since, as noted above, poor communities are believed to require a combination of all three forms for optimal development (Woolcock, 2000; 2001; Das et al., 2003). Development of social capital is essentially viewed in terms of transcending pre-existing, intra-community stocks of social capital to move toward more beneficial social relations. The transformation is necessary for the reason that internal relations within low-income settlements, although often crucial for day-to-day survival, are not by and large deemed adequate for "getting ahead," which requires additional resources obtainable only through extra-community ties and networks (Woolcock, 1998; 2001; Gittel and Vidal, 1998; World Bank, 2000; Das et al., 2003). Most discussions of bottom-up development, therefore, emphasize the importance of mobilizing and, in some cases, strengthening the bonding relations within the community as a base for incrementally forging bridging and linking social capital (e.g., Das et al., 2003).

The idea of constructing social capital at the community level, however, has its detractors, such as Harriss (2001), Schuurman (2003) and Stoecker (2004), who argue that the approach implicitly blames the poor for the "deficit" in their social relations, placing the onus on them for their development and shifting the focus away from macro-level structures of inequality. For Harriss, the notion of building social capital in poor communities, particularly the World Bank discourse, is couched in essentially technical terms (a matter of "getting the social relations right") and consequently apolitical. Proponents of bottom-up strategies, however, counter that the approach acknowledges and builds on what the poor already have (e.g., bonding social capital), and maintain that the concept of linking social capital can address notions of power and inequality (World Bank, 2001; Halpern, 2005).

Efforts to promote social capital at the community level, however, are hampered by limited theoretical understanding at this stage about how it develops, either as a bi-product or

directly created. Grand theory about social capital development has not yet been put forward; instead, a number of partial propositions have been made about the interdependence of the structural and cognitive components (Uphoff, 2000), the propensity for stocks of social capital to increase with use (Putnam, 1993), and the equilibria states of "virtuous circles" and "vicious spirals" (Putnam, 1993). Nor is there a conceptual blueprint for how to directly promote social capital at the community level. The major theoretical gaps concern which facets of social interaction in general are significant in producing norms of reciprocity and generalized trust, the two key cognitive sources of social capital, and how the causal mechanism works (Stolle, 2003). Interventions to construct social capital in communities have been based, thus far, on an incomplete understanding of the processes involved.

Development efforts to construct social capital in communities have focused almost entirely on voluntary, membership-based associations such as CBOs, rather than families, households and informal networks, *assuming* that such structures will nurture the primary cognitive components (Stolle, 2003; Harriss, 2001; Cleaver, 1999). It is widely believed that associations, through repeated interaction among individuals, are an effective means to reduce opportunism and promote cooperative norms and trust (Grootaert, 2001; Stolle, 2003). Grassroots organizations, moreover, are viewed as advantageous to social capital formation because they can be established fairly quickly and are considered more robust than informal networks (Uphoff, 2000; Cleaver, 1999). Nevertheless, empirical proof of the link between membership in associations and cooperative values and trust has not been established and, therefore, the centrality of voluntary associations in social capital formation is open to question (Stolle, 2003; Cleaver, 2005). Although the objective of many development strategies is to establish or support structural social capital at the community level, usually in the form of associations, approaches to developing cognitive elements are usually not explicit.

2.7 Related Concepts: Civil Society and Social Cohesion

The term "civil society" figures prominently in many discussions of social capital and is, at times, employed more or less interchangeably with social capital (Edwards, n.d.). Like social capital, defining civil society is not straightforward since no conceptual agreement exists amongst theorists (Elliot, 2003; Foley and Edwards, 1998a; Swift, 1999; Hyden, 1997). On the contrary, many views of civil society have emerged out of different political traditions and

historical experiences in various parts of the world.[11] Much of the scholarly debate centers on what civil society includes (and does not include), its fundamental purpose or roles, and the nature of the relation between civil society and the state. In my research, civil society refers to "the associational realm between the family and the state made up of organizations having significant autonomy from the state and market that are formed voluntarily by members of society to protect or advance their interests and values."[12] I have chosen this formulation because it is structurally comprehensive and non-normative which, in my estimation, is more appropriate than narrower conceptualizations for the social diversity of India.

Commonly thought of as part of civil society are the types of organizations discussed earlier: CBOs and NGOs. The full gamut of civil society, though, according to my boundaries, is much larger – encompassing informal networks, modern organizations, mass movements and traditional relations, but not groups that are unambiguously anti-social (e.g., criminal gangs or terrorists).[13] The inclusion of traditional forms of association is contrary to most Western conceptualizations which stipulate openness of membership (i.e., freedom of entry and exit to all) (e.g., Hall, 1998; Hyden, 1997; Gellner; 1995); nonetheless, many Indian scholars include ascriptive structures (e.g., Varshney, 2001; Betéille, 2003; Oommen, 2003), as do some Western academics (e.g., Douglass, 2007; Hann, 1996; White, 1994; White, 1996; Esman and Uphoff, 1984; Korten, 1990; Robinson, 2003). For my research, a useful distinction is that between associations based on traditional or ascriptive social relations (i.e., communities of birth, such as caste, religion or place of origin) and elective social structures (e.g., a group of friends from different backgrounds, an open university).

Civil society, in my view, comprises associational life that is non-political and separate from the state (e.g., local cricket clubs), that is, "civil society for itself" in the phrase of Douglass (2004), as well as that which is inherently political (e.g., *Hindutva*[14]) or explicitly engaged with the state (e.g., advocacy groups). Where civil society does come in contact with the state, it does not imply a particular type of relationship (e.g., oppositional, reformist, cooperative), as is often the case in the literature. Moreover, civil society in my estimation is

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[11] For useful reviews of the multiple interpretations of the civil society concept, see White (1994), Hann (1996), Hyden (1997), Elliot (2003), and Edwards and Foley (1998a; 1998b).
[12] This definition of civil society is adapted from White (1994; 379).
[13] By including ascriptive associations and informal networks, my interpretation of civil society is closer to a maximalist (pluralist) definition than a minimalist one, yet not as broad as those which include the family (e.g., Cohen and Arato, 1992) or the market (e.g., Howell and Pearce, 2001).
[14] *Hindutva* is the ideology of Hindu nationalism which seeks to transform India from a secular state to a Hindu state

not always a positive force for society at large, as many proponents maintain.[15] This is not to say that civil society is inimical to the greater good, only that the connection is not preordained (Elliot, 2003; Ehrenberg, 1999). Civil society represents interests and values that are universalistic as well as particularistic, which means that there can be positive or negative externalities for wider society. Thus, I am using civil society as a comparatively neutral term. This broader interpretation of civil society stands in contrast to the more specific, communitarian notion of "civic community" of Putnam and other neo-Tocquevilleans, also known as the associational school in the literature. The notion of civic community is essentially a normative concept, bound up in the values of community mindedness, citizen engagement in the public sphere, and participatory democracy (Ehrenberg, 1999; Foley and Edwards, 1998a; Hyden, 1997).[16]

Social cohesion is another complex, overlapping concept with no universally agreed-upon definition. Social cohesion is sometimes employed in the social capital literature to refer to the capacity of a group of people, generally speaking (i.e., however the group is constituted), to act or work together and, therefore, implies horizontal interconnectedness and internal unity; in this sense, the term is virtually synonymous with Woolcock's "integration." For a number of theorists of social cohesion, however, the term has a more specific meaning related to the underlying structures of society that give rise to social differences such as caste, class, gender, and so on (e.g., Coletta et al., 2000; Twigg and Schecter, 2003; Cheong et al., 2007). Much of the academic interest has focused on ethnic differences. Conceptualized as such, social cohesion refers to the propensity of people to cooperate, if not act in unison, given their basic social differences. This understanding is concerned, then, with the workings of the major social divisions in society, that is, whether the diverse interests embodied in social differences are accommodated such that acting together is viable, or whether such differences are essentially divisive and cause problems.

The latter meaning of social cohesion does not connote the absence of social differences or discord; in communities or societies that are fragmented, the literature contends that cohesion can be promoted through inclusionary processes and mechanisms for conflict

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[15] Among the numerous scholars who hold positive evaluations of civil society are Tandon, who associates the concept with "the common public good" (2003; 64); Putnam (1993), Diamond (1994) and Hyden (1997) who view civil society as inculcating cititizenship and strengthening democracy; and Hall who describes civil society idealistically as "that which can make our social world decent and desirable" (1998; 32).

[16] For further discussion of the civic community idea, the positive roles generally attributed to civil society, and a disentangling of the civil society and social capital concepts, see Appendix A.

resolution (Forrest and Kearns, 2001; Coletta et al., 2000). The concepts of social inclusion and exclusion, which have become popular over the past few years, fit into this paradigm; the focus here is on the relationship between certain groups, as defined by salient social divides, and the dominant or mainstream society (Coletta et al., 2000; Grootaert et al., 2004).

For some scholars, moreover, social cohesion is an all-embracing notion that covers the micro- and macro-levels of society; from this perspective, social capital is regarded as the narrower term (e.g., Kawachi and Berkman, 2000; Coletta and Cullen, 2000). Thus, social cohesion and social capital have become rival concepts, adding to the academic confusion. In my theoretical framework, however, social cohesion is a subset of Woolcock's integration; the former term focuses on the dynamics of the core social divisions, and the latter encompasses the totality of interconnections across society, including relations inhering within households and civil society. One final point about social cohesion concerns whether it represents a source of social capital or an outcome. Several theorists regard social cohesion as an outcome (e.g., Twigg and Schecter, 2003; Forest and Kearns, 2001; Grootaert et al., 2004). Social cohesion can also be viewed as a source of social capital, in that a more cohesive community or society would likely have a greater capacity for cooperative behaviour and collective action than one that is internally divided. For the purpose of my empirical research, social cohesion is considered part of the structure of the study community, in other words, as a source of social capital, leaving collective action as the outcome. Finally, I look at social cohesion as positively related to collective action, which is well-supported in the literature.

Chapter Three: Collective Action Theory

This chapter looks at collective action theory as it relates to the community or local level. The objective of the chapter is to give a conceptual underpinning for the collective action research question. The first section reviews general collective action theory through the contributions of several leading theorists in the field, namely, Olson, Hardin and Ostrom. The second section focuses on collective action as it applies to community-based urban environmental management (CUEM) and presents the framework of Douglass (1995).

3.1 Overview of the Literature

Although social capital can be viewed as a model of collective action, the literature on collective action comprises multiple theories representing different intellectual traditions that predate the social capital literature by several decades, if not longer.[1] Accordingly, the body of scholarship on collective action is probably more voluminous than that of social capital. Whereas the notion of social capital advanced by theorists like Putnam (1993; 2000), Uphoff (2000) and Khrishna (2000; 2002; 2003) is fairly positive about the capacity of people to cooperate and work together for mutual benefit, earlier theorization of collective action is essentially pessimistic.

3.1.1 Olson's Logic of Collective Action

The classic work on collective action theory, Olson's *The Logic of Collective Action* (1965), fits in this mould. Olson argued that groups of individuals with a shared interest are unlikely to act together to further that interest, unless some form of coercion or selective incentives exists to compel them to do so. Individuals are not inclined to act voluntarily for the common good, Olson contended, because they are inherently rational and self-interested; each person, in other words, seeks to maximize his or her own welfare and, consequently, prefers that the group objective is provided by other members. The conceptualization of Olson has become synonymous with the economic theory of collective action (Udehn, 1996).

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[1] Academic study of collective action preceded interest in social capital by close to thirty years, if one uses Olson's *The Logic of Collective Action* (1965) as the reference point for the former and Putnam's *Making Democracy Work* (1993) as the barometer of the latter. However, it is argued that sociological theory of collective action has much earlier origins in Marx's 19th century writings about class-based struggles and the proletarian revolution (Udehn, 2000). The dilemma of collective goods, more generally, has been traced back to the fourth century BC, as evidenced by Aristotle's proposition: 'What is common to the greatest number gets the least amount of care. Men pay most attention to what is their own: they care less for what is common' (Aristotle in *Politics*, Book II, Chapter 3, quoted in Ostrom, 1990; 2).

I will elaborate on Olson as my empirical chapter on collective action utilizes a number of his ideas. Olson was primarily concerned with formal organizations such as labour unions, corporations and pressure groups, and drew many of his examples from the United States; however, his theory is considered relevant to broader contexts in which the common interest is, in effect, a public good[2] and, hence, members of the group cannot be excluded from associated benefits. Although he did not actually use the term "free rider," Olson (1965) is credited with the fundamental idea of individuals wanting to benefit from the efforts of others towards the common interest, whilst refraining from contributing themselves. The temptation to free ride exists when members of the group, whether they contributed or not, cannot be excluded from the benefits associated with the common interest (or such exclusion is costly). In many accounts of collective action, the free-rider problem is understood as the crux of the matter (Sandler, 1992; Mukhija, 2005).

The main proposition of Olson (1965) is that the size of the group is a major determinant of collective action; he distinguished between small, intermediate and large groups on the basis of quantitative and qualitative aspects. Collective action is improbable in large groups, Olson posited, because the contribution of any single individual does not ordinarily make an appreciable difference to the group as a whole, nor to the costs and benefits of other members. Conversely, in small groups, collective action is more likely, as individual contributions can be significant to the group objective and alter the structure of costs and benefits. The plausibility of collective action arising in intermediate-size groups, which share some of the features of small and large groups, falls somewhere in between. Though the number of individuals in the group is, for Olson, the overriding factor in collective action, he acknowledged, in a limited way, that group composition plays a role. Insofar as group members often differ in terms of personal interest in the collective endeavour, certain individuals having a high degree of interest will tend to bear a disproportionate amount of the costs and, as a result, enhance collective action. When some members or even one individual is willing to ensure that the collective objective is provided, this is what Olson calls a "privileged group." At the other extreme, when no members have an incentive to contribute to the collective objective, Olson uses the term "latent group," which is usually a large-size group. The latter groups are latent in

[2] Categories of goods are defined in terms of the attributes of excludability (the degree of difficulty involved in excluding individuals from benefiting from a given good) and subtractibility (the extent that one individual's use of a good diminishes another individual's use of that good. In public goods, exclusion is difficult and subractibility is low (Ostrom et al, 1994).

the sense that they possess an underlying potential for collective action but, in order to function in the collective interest, they need to be "mobilized" by means of selective incentives or coercion.

Olson was aware that incentives, which facilitate collective action, can be economic as well as social in nature; in small- and intermediate-size groups, especially, friendship, respect, and reputation come into play. Incentives can be both positive and negative (similar to social sanctions). Incentives can also be psychological, such as self-esteem. From the standpoint of Olson, all incentives are, by definition, selective or non-collective and, therefore, consistent with the premise of the rational, self-interested individual and not in contradiction with his larger theory. To wrap up about Olson, his theory is not regarded as having universal validity, given the many forms of collective action, yet remains influential as far as setting out general principles (Sandler, 1992).

3.1.2 Hardin's Tragedy of the Commons

Appearing a few years after Olson's book was Hardin's short article entitled "The Tragedy of the Commons" (1968), which has also garnered considerable academic attention, particularly in the environmental literature. Compared to Olson, Hardin's treatise on collective action is, on the whole, more negative, if not downright gloomy. In the well-known metaphor employed by Hardin, the commons is a pasture open to all herders. Hardin predicted that, in this scenario, each herder will add as many cattle as possible to his or her herd, leading inevitably to overgrazing and ruination of the pasture for all; the premise, like Olson, is that herders seek to maximize personal gain and, therefore, from each herder's perspective, adding more animals is entirely rational as the benefit of doing so, which accrues to the individual (a private good), outweighs the cost of overgrazing, which is borne by the group (a public good). Although Hardin was making an analogy to the general problem of population size, he contended that any common good, such as the oceans, national parks, and the capacity of air and water to absorb wastes, was subject to similar misuse.

Hardin has been strongly challenged, however, on both empirical as well as theoretical grounds. Feeny et al (1990) and others have clarified that Hardin's argument applies to open-access commons (in which everyone has access and use privileges), rather than limited-access commons (where access and usage are restricted to a defined group of individuals). Indeed, some thirty years after his seminal article was published, Hardin granted in another paper that

his metaphor referred, not to all commons, but to the subset of *unmanaged* commons (1998). Though controversial, Hardin's thesis is symbolic of the difficulties inherent to collective action when many individuals utilize a finite or scarce resource. In addition, Hardin's argument has informed policy-making as a justification for privatization of common property or centralized control (Ostrom, 1990; Mukhija, 2005).

3.1.3 Ostrom and Common Property Resources

A more recent branch of the literature, focusing on common property resources[3] (CPRs), is more encouraging that groups of individuals, under certain circumstances, can cooperate and work together in a manner that does not bring about tragic results. Referred to as institutionalism, the foremost theorist is this field is Elinor Ostrom (1990; 1998; 2000; 2001; 2003), who argues that groups of people have agency to organize themselves, form arrangements, and create their own institutions of governance to ensure that benefits are shared and the resource base is not overused. Ostrom (1990) provides documentation of successful, self-governed CPRs, including communal tenure in alpine environments in Switzerland and Japan, irrigation institutions in Spain and the Philippines, and inshore fisheries management in Turkey. In some instances, common property resources have been sustained for hundreds of years. At the same time, CPR regimes are not always effective and Ostrom (1990) gives examples of failed and precarious cases. Besides Ostrom, many researchers have contributed to the growing body of scholarship (Baland and Platteau, 1996; Berkes, 1989; Libecap, 1994; Bromley et al, 1992; Gibson et al, 2000, Meinzen-Dick et al, 2002). Among the developing countries, India has been a particularly fertile source for empirical studies (Wade, 1988; Agarwal and Narain, 1997; Agrawal and Ostrom, 2001; Kadekodi, 2004; Bardhan, 1999a; Kurien, 1995; Blair, 1998).

One of the key insights of Ostrom (1990) is that, in local settings, where groups of individuals have regular interaction and are cognizant of their interdependence in relation to the resource base, they are not necessarily locked into exploitation of the commons and the possibility exists of them altering their situation. In contrast to Hardin's mythical commons where the herders can only act atomistically and, hence, the outcome is pre-determined, such groups are able to change "the rules of the game." Ostrom has advanced a framework of

[3] Common property resources, also known as common-pool resources, are a class of goods in which exclusion is difficult and subtractibility is high (Olson et al, 1994). Examples of common property resources include forests, range land, wildlife, fisheries, and surface and groundwater (Feeny et al, 1988).

analysis to help explain how and why groups modify the social structure through which they utilize resources, looking at factors internal and external to the group. External variables encompass the economic, political, legal and technological environment, while internal variables pertain to the specific characteristics of the group, the common property resource, and the institution set up to govern resource use (Ostrom, 1990; Dolšak and Ostrom, 2003).

Much of Ostrom's work has centred on the features of institutional design that enable groups to act in the collective interest over the longer-term. Ostrom (1990) identifies the essential functions of CPR institutions as the following: delimitation of the user group, allocation of resource use and costs, monitoring of resource conditions, regulation of user behaviour, and conflict resolution. Resource use represents individual-level benefits, whereas costs refers to individual-level investments or duties and responsibilities in relation to the resource; the compatibility of both resource use and costs with the state of the resource is important so that the resource does not deteriorate. Institutional decision-making is oriented towards mutually agreed-upon commitments, which are codified as rules and backed up by graduated sanctions for rule-breaking behaviour (Ostrom, 1990; 2000; Dolšak and Ostrom, 2003). Since elements of the larger system are oftentimes not static (e.g., the external environment, resource conditions, or the group itself), institutions require some degree of flexibility to respond and modify rules from time to time, thus necessitating constitutional-level rules, or rules about rules. All of the core functions, moreover, cannot be so costly that the rationale for collective action is compromised. Although there is no prototypical design, the various institutional forms that have proven robust in different contexts similarly serve to transform the fundamental nature of incentives from individualistic or opportunistic to group-based (Ostrom, 1990; Dolšak and Ostrom, 2003).

Consistent with Putnam (1993), Ostrom (1990; 2000) utilizes the term "social capital" to denote attributes of groups that support cooperative behaviour and collective action in general. To Ostrom (1990; 2000), social capital is a community-level asset denoting particularized trust, shared norms, and dense networks that connect members of user groups in multiple ways (1990). A foundation of trust, for example, instils expectations about the behaviour of others and, thus, helps ensure individual compliance with rules, which is pivotal to institutional efficacy (Ostrom, 1990; 2000; Dolšak and Ostrom, 2003). Ostrom emphasizes that building social capital is contingent on repeated interaction, especially of the face-to-face kind, over an extended period of time; hence, it cannot be easily induced (Ostrom, 1990; 2000; Dolšak and

Ostrom, 2003). Though Ostrom does not employ the current terminology of community-level social capital she is, nonetheless, referring qualitatively to bonding relations or relatively closely-knit social structures. In reference to Ostrom's framework of resource use, while the social capital of the group is an important determinant of whether they can work together to manage the CPR, it is not the only factor; the characteristics of the resource and the external environment are influential as well. To illustrate, a group might have aspirations to establish a common property institution, yet the legal right to do so could be denied by the state.

The relevance of Ostrom's theory about collective action for the management of common property resources in rural settings is probably not readily apparent in the urban environment. To my knowledge, no researcher has employed Ostrom's mode of institutional analysis to explain collective action in urban settlements in developing countries. It is likely that the nature of collective action would differ across rural and urban contexts in terms of, for example, the focus or purpose (e.g., natural resources vs. urban infrastructure and services), motivation (economic or survival-oriented vs. quality of life), and social structures (traditional vs. contemporary). Still, I agree with Ostrom (1990) that her conceptual framework has applicability for collective action related to other local public goods, including those in the urban environment, insofar as all such efforts to promote the collective interest face the same types of problems, such as free riding, creation of new institutions, and monitoring for individual compliance (1990).

Ostrom's work attests to the instrumentality of ongoing social interaction, communication and organization for collective action generally; in the case of the CPR institutions, the fact that groups have not only utilized, but also maintained, particular natural resources, which can be complex, variable and unpredictable, is no small accomplishment. As such, Ostrom's conceptualization of common property institutions demonstrates how social capital can be a major asset for groups. Furthermore, Ostrom's work suggests that, even in situations where groups have a high level of mutual trust and strong social norms, the temptation to free ride is ever-present and it would seem that to ensure the collective interest, in the absence of formal authority, self-interest has to be kept in check through institutionalized social controls.

3.1.4 Critical Commons Literature

To round out the discussion, an emerging body of literature is challenging the mainstream thinking in the collective action field. Whereas the institutionalists, like Ostrom, are primarily interested in the characteristics of natural resource management systems from the standpoint of efficiency of resource use and environmental sustainability, the critical commons scholars, such as Mosse (1997), Cleaver (2000), Blair (1996) and Johnson (2000), are primarily concerned with themes of inequality, poverty and social exclusion (Johnson, 2004). The critical commons perspective, in other words, disputes the basic optimism of the institutionalism camp in favour of a more complex and contingent understanding of the socio-economic effects of local institutions. Furthermore, arguing against the utilitarian and apolitical approach of the new institutionalists, critical commons scholars advocate a more rigorous structural-historical analysis so as to reveal how such processes shape resource access and entitlement (Johnson, 2004). In this vein, Mosse (1997) utilizes an historical and ethnographic approach to show how common property institutions for tank irrigation in Tamil Nadu, India, were dominated by the interests of male, high-caste villagers. As such, the regulation of behaviour by means of rules, which institutionalists consider important in sustaining the resource base, can also serve to, according to the critical view, create or perpetuate inequalities in resource access (Johnson, 2004). Lastly, while institutional analysis has focused on elucidation of generalizable principles, the critical commons approach is oriented towards a more contextual and dynamic explanation of collective action (Cleaver, 2000; Mosse, 1997).

3.2 Community-Based Urban Environmental Management (CUEM)

CUEM has been defined as "household practices to improve environmental conditions and inter-household collective efforts to increase access to resources and minimize health risks" (Douglass *et al*, 1994; xi). This definition emphasizes the multiple, related objectives of CUEM such as improvement of the local environment and acquisition of basic municipal services. Douglass' conceptualization, moreover, articulates the household and inter-household (or collective action) aspects of community-level management. Accordingly, CUEM can occur at different spatial scales such as the household, lane, neighbourhood and community. My conceptualization of the term includes a wide array of approaches and strategies that communities can and do adopt to meet their needs. In a common form of CUEM, for example,

communities plan, construct and manage environmental infrastructure and systems in their settlements (e.g., building wells and latrines or providing garbage collection). Community-based management, in my view, also includes advocacy by local residents to gain access to municipal services. In addition, CUEM includes education and awareness programs that are oriented toward promoting environment- and health-related behaviour change (e.g., safe handling and storage of potable water in the home).

CUEM is also understood as a continuum from autonomous community efforts at one end of the spectrum, to joint or collaborative activities with external actors, to externally-driven models at the other end of the spectrum. Where CUEM involves external actors in a formal project or program context, the community may be involved in any or all stages, including needs assessment, evaluation of alternatives and final design, construction of facilities, operation and maintenance, evaluation and monitoring, and cost recovery.

For the purpose of this thesis, "community" means a group of people who live in a geographically defined area, identify with that area, and interact with one another in terms of both cooperation and conflict. This conceptualization therefore departs from simplistic notions of communities as homogenous in composition and harmonious in their interactions. In my view, Lee's (1998; 994) characterization of communities as having "a sense of belonging, and shared interests and common values" is limiting. My perspective is more in accord with Guijt and Shaw (1998) who acknowledge the multiple differences within many communities, such as gender, ethnicity, caste, religion, economic status and age. These intra-community differences may well have negative externalities, such as internal cleavages, oppressive social hierarchies, discrimination, and power imbalances within communities (Guijt and Shaw, 1998). An awareness of the heterogeneity of many low-income communities is important for understanding CUEM. Divisions within the community may constrain collective action. Furthermore, the priorities of more powerful groups may dominate decision-making around community management, such that improved services or other benefits are not equitably distributed.

3.2.1 Douglass' CUEM Framework

Due to the fact that academic interest in CUEM does not have a long history, the theoretical framework is at an early stage. Two of the more important contributors to emerging theory in the context of low-income communities in the developing world are Douglass (1992; 1995;

1998) and Lee (1998). Of the two researchers, Douglass has proposed the most comprehensive framework to date. According to Douglass (1995), successful CUEM is contingent on a constellation of factors that operate at three scales: the household level, the inter-household/community level, and the wider society. Douglass (1995) has formulated a set of general CUEM principles pertaining to the various levels, which is given in Table 3.1 below. His framework derives from empirical evidence from the early 1990s in slum communities in five Asian cities (Bangkok, Bandung, Bombay, Hong Kong and Seoul).

At the household level, Douglass (1995) asserts that managing basic environmental resources and problems is dependent on maintaining an intra-household division of labour which is, in turn, related to household composition and size (i.e., the number of persons in the households). Thus nuclear and extended families, as well as larger households, are more likely to engage in environmental tasks than one-parent families or dormitory-type households. Similarly, households with a greater degree of stability in the community are more apt to engage in CUEM. Legal title does not seem to be a prerequisite for community investment in environmental management (Douglass, 1995). In the absence of legal standing, the perception of tenure security is significant. Residents of low-income communities tend to use other barometers of stability, including the length of time that the settlement has existed, the extent of government investment in community facilities, and the past history of government eviction (Douglass, 1995). The connection between tenure security and household investment in environmental infrastructure is also made elsewhere in the literature (e.g., Choguill, 1996; Hardoy *et al*, 1992).

At the community level, Douglass (1995) contends that inter-household cooperation is essential to CUEM. In low-income communities, the lack of household facilities means that cooperation is crucial in sharing and managing facilities like standpipes, communal toilets and garbage bins. Sustaining inter-household networks is contingent on minimizing "free rider" problems. Furthermore, community organization and inclusive forms of leadership are important factors in CUEM (Douglass, 1995). Some form of internal leadership is needed to motivate the community at large, resolve conflicts, pool resources (e.g., labour and money for communal projects), and in providing links to external actors. In addition, local environmental management is greatly improved where women are actively involved in decision-making and have external sources of support (Douglass, 1995).

Table 3.1. Douglass' Framework for Community-Based Urban Environmental Management

Household and Intra-household Allocations of Labour and Resources:

Proposition 1: Environmental improvements and successful environmental management complement rather than diminish income-earning opportunities for the poor.

Proposition 2: Success in managing basic environmental resources and problems (water, drainage, solid waste disposal) at the household level depends upon the capacity to maintain a complex intra-household division of labour.

Corollary 2a: The internal division of labour within the household is contingent upon the (changing) structure of the (urban) economy as a whole.

Corollary 2b: The less diversified the household, the less likely that significant attention will be given to environmental governance; greater reliance will therefore be placed on extra-household sources of management.

Corollary 2c: The degree of engagement in household and community environmental management is positively related to household stability and sense of community membership.

Corollary 2d: Personal and household involvement in planning and management efforts is contingent upon a sense of community stability, which is a function of the perception – rather than actual legal status – of security of land tenure.

Gender and Environmental Management:

Proposition 3: Where women have greater decision-making roles and access to outside sources of support, environmental management is greatly improved.

Inter-Household Reciprocity and Cooperation:

Proposition 4: Maintaining inter-household networks of reciprocal exchange is of critical importance to household efforts to manage their habitat and environment.

Corollary 4a: Sustaining inter-household networks depends upon the capacity to minimize free-rider problems.

Community Organization and Leadership:

Proposition 5: Sustaining community-level environmental management requires establishment of hierarchical but inclusive community organization and leadership.

Corollary 5a: Community mobilization for political action is often generated by perceptions of shared crisis; successes will depend upon enlarging political solidarity through "moral high ground" issues.

Corollary 5b: Household and community self-management arises from systemic failures (notably, market and government); conversely, where markets and/or governments provide services to a significant portion of the community, community self-management declines.

Corollary 5c: The general pattern of household type and composition appearing at the community scale will have a decisive relationship to environmental management propensities and capacities.

Corollary 5d: Cultural and/or religious institutions are important sources of community organization and mobilization.

Corollary 5e: Environmental management cannot be sustained without a clear sense of efficacy by the participants.

Community Environmental Management Viewed from Above: State and Community

Proposition 6: The market alone has been ineffective in either sustaining improvements in environmental conditions in low-income communities or ameliorating the housing and habitat problems facing the poor even under very high rates of economic growth. Where improvements have been made, government intervention has been critical, although the results have been partial.

Corollary 6a: Where governments take over community leadership and organization or inhibit their development, community mobilization will change from active management to political pressure, either through spontaneous forms of political agitation or through more organized means such as political parties (where they are allowed).

Corollary 6b: Trends toward democratization will benefit community management efforts.

Linking Below and Above: NGOs as the Answer?

Proposition 7: Without some form of outside non-government support, sustaining community management will encounter severe, often-insurmountable difficulties.

International Lending and Aid Agencies

Proposition 8: International lending and aid agencies have, over the past decade, become less rather than more instrumental in addressing urban poverty-environment issues despite the growing magnitude of these issues; for community-level actions to reach levels of sustainability in Asia's urban future, these agencies need to redirect their efforts toward supporting organizational and institutional innovations focusing on the community scale.

Source: Douglass (1995)

Extra-community factors include links to NGOs that can play an important role in helping to organize the community and in creating linkages between communities and wider political structures (Douglass, 1995). Lee's (1998) study of Bangkok slums, in which NGOs initially organized slum dwellers so that they could apply for household registration numbers (a condition for receiving municipal services in Thailand), supports Douglass' contention about the instrumentality of supportive external actors. Douglass (1995) also links the need for household- and community self-management to the systemic failures of governments and markets.

Douglass' conceptualization represents a seminal contribution to the emerging literature on CUEM, particularly in his formulation of a tentative "meta-framework" based on the case studies of Asian cities, his identification of three geographic scales which influence community management (i.e., household, neighbourhood or community, and wider society) and his set of propositions about determinants at each level. Still, many questions remain, such as which of Douglass' enabling factors are crucial for success, what kinds of external intervention best facilitate CUEM, and how might failed efforts be explained satisfactorily.

Chapter Four: Society and the State

This chapter discusses basic social structures in India in order to provide a broad context for the subsequent empirical chapters. The chapter is divided into five main components. The first section looks at structures such as the caste system, class, religion and gender. The second section gives an overview of Indian civil society, and the third section focuses on the Indian state. In the fourth section, the customary pattern of state-society relations in the country is characterized. The fifth section examines the emergence of a new paradigm of urban governance that is predicated on a restructuring of traditional state-society relations. The sixth and final section reviews the limited, yet insightful, empirical research on social capital in India.

4.1 Primary Social Structures

India is often celebrated for its rich cultural diversity – a legacy of plural traditions (Hinduism, Islam, Mughal rule, British colonialism and other influences) that have taken root in a large and varied physical landscape over a long history. At the same time, Indian society is widely characterized as internally divided or fragmented due to complex cleavages along the lines of caste, class, religion, language, region, gender and other dimensions (Béteille, 1998; Drèze and Sen, 2002; Saberwal, 1996; Blomkvist, 2001; Serra, 2004; Gore, 2003). That fissiparousness is generally viewed as reflective of entrenched hierarchies and major inequalities between different groups and communities, not only in terms of material conditions but also in life opportunities, social status and political power (Drèze and Sen, 2002; Gore, 2003; Béteille, 1995; 1998; Bhattacharyya et al., 2004). Since Indian independence in 1947, progress has been made towards reducing some aspects of pervasive disparity in favour of a more equitable social order, yet the pace of social change has been uneven across the subcontinent (Drèze and Sen, 1997; 2002).[1] Certain segments of the population, especially the Scheduled Castes (SCs)

[1] Broad achievements in post-independent India that have fostered greater social equality include imposition of land ceilings that have restricted the dominance of rural elites, economic advancement among the peasant castes, the introduction of universal suffrage, and increasing political power of the lower castes (SCs, STs and OBCs) (Drèze and Sen, 2002). Several Indian states are notable in regards to successful challenges to traditional structures of power that have underpinned social and redistributive development. In West Bengal and Kerala, for instance, class-based political mobilization has resulted in comprehensive agrarian reforms and new institutions for participatory democracy (Sengupta and Gazdar, 1997; Heller, 1996; Drèze and Sen, 2002). Kerala, moreover, is remarkable compared to the rest of the country on account of its accomplishments of near-universal basic education, extensive social welfare programs, and more equitable gender relations (Heller, 1996; Ramachandran, 1997). In states such as Uttar Pradesh and Orissa, however, traditional inequalities of caste, class and gender have proven particularly resilient and, consequently, social change has been slow. In these and other parts of the

and Scheduled Tribes (STs), as well as groups defined by multiple and mutually-reinforcing types of inequality, remain chronically disadvantaged (Drèze and Sen, 2002; Drèze and Gazdar, 1997; Gore, 2003). The part below looks at the dimensions of caste, class, religious affiliation and gender as axes of social similarity and difference in the Indian social fabric and, as such, correspond to the concept of integration (horizontal or societal-level social capital) in Woolcock's model.

4.1.1 Caste

The caste system, regarded by many as the quintessential institution of Hindu and, moreover, Indian society,[2] is the subject of a massive literature that contains divergent interpretations of its historic function and modern significance (Béteille, 1997; 2003; Fuller, 1997; Bayly, 1999). In a seminal work of Indian sociology called *Homo Hierarchicus* (1970), Dumont portrayed traditional Indian society as so distinct from other societies to almost warrant a different category of humanity. Dumont conceptualized caste as a monolithic, hierarchical structure governed by the Brahminical principles of purity and pollution (Bayly, 1999; Fuller; 1997). Though still influential, Dumont's theory has been criticized for its over-reliance on classic Hindu texts and on other grounds (Bayly, 1999; Fuller; 1997; Rao and Walton, 2004). A key contributor in the debate on caste has been Indian sociologist M. N. Srinivas (1989), who contends that the traditional caste system permitted a degree of social mobility via the process of sanskritization.[3] Srinivas and other scholars have advanced a less rigid and Brahminical interpretation of the tradition caste order, emphasizing instead the vertical interdependence of service and exchange between caste groups, the role of kings and local rulers in structuring the social order, resistance of lower-castes to subordination, and spatial variation (Bayly, 1999; Fuller, 1997).

Currently, however, no single model exists to explain caste in traditional terms and

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country, there are many instances of deprived groups that have contested the status quo only to be intimidated or brutally suppressed by those more powerful (Bayly, 1999; Drèze and Gazdar, 1997).

[2] Although the caste system is commonly associated with Hindu society, all minority faiths in India (e.g., Muslims, Sikhs, Christians, Jains) are similarly stratified into caste-like groups, in some cases the same caste groups or *jatis* as in the Hindu hierarchy (Betéille, 1995; 1998; Bayly, 1999; Mitra, 1994).

[3] Sanskritization is the process by which a lower-ranking caste or tribe adopts or emulates the customs, rituals, belief system and lifestyle of a higher-ranking caste, which generally would serve to elevate its status in the local caste hierarchy (Srinivas, 1989).

theoretical debates continue.[4] If academic consensus does exist, it would probably be that the caste system embodied a form of social hierarchy that was dynamic rather than static, and heterogeneous rather than uniform, across the subcontinent and over the centuries (e.g., Srinivas, 1989; Mitra, 1994; Fuller, 1997; Bayly, 1999).

In contemporary Indian society, the caste system has by no means vanished; rather, its set of associated meanings and importance in structuring social relations is evolving in new ways (Béteille, 1997; 1998; Fuller, 1997; Mitra, 1994). The nature of that shift is not fully evident, in part due to lack of academic consensus around the traditional order, and the long-term direction is uncertain (Béteille, 1998). Over the past 150 years, and particularly since Indian independence in 1947, an array of opposing forces has been brought to bear on the institution of caste. Major factors that have had erosive effects on caste include: reformists within India such as Gandhi and Nehru; the adoption of the Indian Constitution, which enshrined the principle of equality for all citizens and outlawed discrimination based on caste, as well as religious denomination, gender, language, ethnic background and birthplace; and exposure to western ideology (Sharma, 2002; Gore, 2003; Béteille, 1995; 1998). To redress past injustices, the state has put in place caste-based reservation policies (India's version of affirmative action) in government employment, political representation and educational admissions. Reservations have enhanced opportunities for some members of the lower castes, yet been very controversial and had the unintended consequence of exacerbating caste-based cleavages (Khilnani, 1997; Bayly, 1999; Béteille, 1995; 1998).

Caste, furthermore, has played a large role in Indian politics over the past several decades, with politicians of all stripes commonly appealing to particular caste-based interests (and religious, regional and other identities), as opposed to more universal social goals (Béteille, 1997; 1998; 2003; Drèze and Gazdar, 1997; Chhibber, 1999; Khilnani, 1997; Sharma, 2002; Jayal, 2005). The mobilization of caste-based and other ascriptive solidarities in the political realm is widely believed to have reinforced boundaries between groups and been divisive for Indian society as a whole (Béteille, 1995; Sharma, 2002).

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[4] Key academic debates over the traditional caste system centre around its origins, the rigidity of caste boundaries, the role of kings and local rulers, the extent to which caste principles were contested and modified in practice, and the influence of colonialism (Mitra, 1994; Bayly, 1999; Fuller, 1997; Corbridge and Harriss, 2000; Ali, 2002).

Though Dumont's conceptualization of traditional Indian society has been disputed, his thesis of substantialization, regarding the modern transformation of the caste system, is considered highly relevant (Bayly, 1999; Fuller, 1997; Ali, 2002). Substantialization refers to movement away from the hierarchical basis of caste towards a more horizontal arrangement of disconnected, ethnic-like caste groups; in this process, individual castes become substantialized (i.e., more exclusive or ethnic-like) through assertion of their alleged intrinsic cultural distinctiveness (Bayly, 1999; Fuller, 1997). The transition can be also understood as the decay of the Hindu *varna* framework (the ranked orders of Brahmin, Kshatriya, Vaishya, and Shudra) and increasing importance of *jati* (the specific caste group that someone is born into, and which number in the thousands in India) (Béteille, 1977; 1998; Ali, 2002; Srinivas, 1989). Substantialization, which has been actively cultivated by Indian politicians, has in many areas of the country facilitated powerful caste-defined moral claims and entitlements, realigning social relations from vertical interdependence to intense competition among groups for scarce economic and political resources (Khilnani, 1997; Bayly, 1999; Fuller, 1997; Ali, 2002).

While substantialization, competitive politics and other factors have brought post-independence India closer to a more horizontal albeit stratified social space, the traditional caste system has proven resilient in a number of respects (Gore, 2003; Bayly, 1999). Even though the Indian state is committed in principle to social equality, hierarchical patterns and customs are still manifest in practice (Béteille, 1998). The majority of senior government posts, for example, are held by members of the higher castes (Bayly, 1999; Béteille, 1995; 1998). Across the country, caste is associated with every form of social disparity, such as income, wealth, occupational status and education level (Béteille, 1995; Drèze and Sen, 2002). Principles of rank, caste solidarity and boundaries endure as well in the private, domestic domain. All castes in India maintain and reproduce group identity through endogamy rules, though the incidence of inter-caste marriages may be on the rise amongst higher-class urban dwellers (Béteille, 1997; Fuller, 1997; Gore, 2003).

Caste remains important also as far as quotidian social interaction, influencing the sphere of individual and familial acquaintances and friends, as well as personal relations in the workplace (Gore, 2003). To some extent, pollution barriers between higher- and lower-castes carry on irrespective of the constitutional abolition of untouchability, and lower caste-groups continue to dominate the occupations perceived as ritually unclean (e.g., street sweeping,

leatherwork and clothes washing) (Bayly, 1999). In light of the multiple and conflicting forces acting on the caste system in contemporary India, Fuller has aptly commented that "the social fact of caste appears increasingly ambiguous, inconsistent and variable" (1997; 26).

Given that sociological research has been undertaken primarily in rural areas in India, the role of caste in the urban context is far from clear. The literature, however, makes the general claim that caste is increasingly less important in everyday social relations in the urban milieu (Béteille, 1997; Gore, 2003; Ali, 2002; Fuller, 1997; Kosambi, 1994). While the reasons are no doubt complex, part of the explanation is believed to be the cosmopolitan make-up of many Indian cities, in that urban dwellers are more likely to be exposed to other caste groups than would be the case in rural settings (Gore, 2003). Caste-based residential segregation, a feature of many Indian villages, is problematic in cities where housing is in short supply and people oftentimes must take whatever accommodation they can find (Gore, 2003), as in Delhi. Occupational diversity in urban areas is considered another factor in the attenuation of caste-based networks and greater fluidity in social relations (Munshi and Rosenzweig, 2005). The literature suggests, furthermore, that the significance of caste identity at an individual level is declining amongst well-educated, professional urbanites, but remains relatively more important as a measure of status within economically poorer groups (Ali, 2002; Béteille, 1997; Fuller, 1997). Though consensus exists around the gradual weakening of caste in the public sphere in the urban context, the social structure is still considered influential in the private sphere (Fuller, 1997; Gore, 2003).[5]

4.1.2 Class

According to the literature, class (in the broad sense of the distribution of wealth, income, occupation, education and power, as opposed to a Marxian interpretation) is increasingly eclipsing caste as a category of social status in contemporary Indian society, in urban as well as rural settings (Béteille, 1997; Ali, 2002; Kapadia, 2002; Gore, 2003; Kosambi, 1994). The historically strong association between caste and wealth is still present, but becoming weaker (Béteille, 1995; Ali, 2002). The growing importance of class signifies a qualitative change in the meaning of status in the direction of individual achievement over ascription (i.e., social position based on caste membership (Ali, 2002; Kosambi, 1994). Concurrent with the societal shift towards class-based notions of status, economic differentiation is occurring within

[5] Additional information on the Indian caste system is provided in Appendix B.

individual castes due to factors such as: differential adoption of Green Revolution technologies in the countryside; occupational diversification, especially in urban areas; and selective benefits of government reservation quotas (Fuller, 1997; Munshi and Rosenzweig, 2005). This growing intra-caste heterogeneity is contributing to the decay of traditional caste ranking (Fuller, 1997). It is indeed ironic that the ideology of substantialization, which emphasizes fixed, homogenized caste identities and hence differences *between* caste groups, has gained prominence as class-based differences have become more pronounced *within* many castes (Fuller, 1997).

A crucial dimension of class structures in India is the divide between literate and non-literate citizens. Illiteracy remains widespread in the country, notwithstanding the Constitutional policy of free and compulsory education for all children up to the age of fourteen years (Drèze and Sen, 2002). Inadequate provision of elementary education is arguably the most serious failure of development planning in post-independent India and underscores, moreover, the state's lack of commitment to basic needs[6] (Drèze and Sen, 2002; Drèze and Gazdar, 1997; Béteille, 1998). The government-run schooling system has performed poorly in terms of coverage, student attendance, learning attainment, quality of service, and accountability (Drèze and Sen, 2002; World Bank, 2003; Banerji, 2000). For various reasons, large segments of the population, including girls, low-income groups, Scheduled Castes and Tribes, and those living in deprived areas, have low levels of access to government schools and, hence, cannot hope to achieve literacy (Drèze and Sen, 2002; Banerji, 2000). Because of the inferiority of government schools, privileged families throughout the country send their children instead to fee-based private schools, which provide a higher standard of education but are not affordable for lower-income households[7] (Drèze and Sen, 2002; Banerji, 2000). Given the large discrepancy between the public and private systems, Béteille (1995) considers the quality of schooling available to children as a more important factor than caste in the reproduction of social inequality.

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[6] As an example of the low priority accorded to basic needs, India has a lower adult female literacy rate than in sub-Saharan Africa and total literacy rates are below many other Asian countries (Drèze and Sen, 2002). India's mediocre track record in elementary education stands in stark contrast to its achievements in higher learning, such as world-class institutions for management and engineering (Drèze and Sen, 2002).

[7] As well, many lower-income Indian families who cannot afford the cost of full-time private schools have their children enrolled in public schools and send them to private after-school classes.

As Drèze and Sen (2002) have argued, the importance of basic education and literacy can hardly be overstated, especially in the case of India with its many forms of disparity. At an individual level, lack of formal education and illiteracy can inhibit understanding, communication and informed decision-making, and act as a constraint to full participation in modern society (Drèze and Sen, 2002; Serra, 2004). Illiteracy makes it harder, for example, for people to access written information, make use of public services, exercise their rights, deal with government officials, and hold politicians accountable (Drèze and Sen, 2002; Serra, 2004). In the broader context, educational disadvantage among many underprivileged groups in India contributes to their lack of "voice" and political marginalization (Drèze and Sen, 2002). For Drèze and Sen (2002), basic education and literacy facilitates participatory development (e.g., greater public discussion of social issues) and can have far-reaching empowerment and redistributive effects (e.g., enhanced capacity of oppressed individuals or groups to resist exploitative relations).

4.1.3 Religion

Turning now to religion as a fundamental social structure, it is well-known that India is the birthplace of numerous faiths (Hinduism, Buddhism, Sikhism, Jainism) and has absorbed other traditions from elsewhere (Muslims, Christians, Jews, Parsis) (Corbridge and Harriss, 2000). Although over 80 percent of its current population is Hindu, India is formally a secular state; the principles of religious freedom and non-discrimination on the grounds of religion are embedded in the Indian Constitution (Jalal, 2005). The country, moreover, has no official church or political representation in the apparatus of government (Béteille, 1998). Since the late 1980s, however, the ideal of secularism, in the sense of equal respect and tolerance for all faiths, has been seriously challenged in India with the rise of *Hindutva* (the ideology of Hindu nationalism) (Corbridge and Harriss; 2000; Khilnani, 1997; Robinson, 2003; Jalal, 2005; Davis, 2005). Hindutva has played a prominent role in watershed events in recent Indian history, notably the destruction of the Babri Masjid in Ayodhya in 1992 and the occurrence of large-scale Hindu-Muslim violence in Gujarat in 2002.[8] Beyond that, Hindutva has become an

[8] The city of Ayodhya in eastern Uttar Pradesh is, in many ways, the epicentre of ongoing Hindu-Muslim conflict in India. It was there that Hindutva activists in 1992 forcibly tore down the Babri Masjid, a sixteenth century mosque built during the reign of Babur (the founder of the Mughal Dynasty in India), which holds great significance for Indian Muslims. The demolition of the Babri Masjid was not spontaneous; rather, it was the climax of a well-orchestrated campaign by Hindu nationalists to reclaim what they believe was the exact birthplace of the Hindu god Rama, the central deity of Hindutva, for the purpose of constructing their own temple

electoral force as its political arm, the Bharatiya Janata Party (BJP), won the General Election for the first time ever in 1999 and subsequently led a coalition government at the national level, only to narrowly lose the last election in 2004 to the Congress Party (Jalal, 2005).

While not all Hindus in India embrace the objective of a Hindu nation-state or support the BJP (party support is mainly upper-caste, higher-class and urban), the effects of Hindutva are far-reaching. Apart from overt Hindu-Muslim hostilities that have broken out intermittently in different areas of the country, the fall-out has been a change in everyday forms of social interaction between Hindus and Muslims, increased fears amongst other minority faith groups, and an overall deepening of internal cleavages around the country (Jalal, 2005; Davis, 2005).

Of course, Hindutva is only part of the religion-politics nexus in modern India. The Hindu-Sikh conflict that erupted in Delhi in 1984 and in the study community of Sultanpuri, specifically, has different roots that go back to Partition and the Sikh separatist movement. At this stage, rather than discussing the complex subject of religion in India any further, I will only make two points. The first is that religion, as basic faith or in its more politicized forms, is clearly an important part of the identity of many Indians. Secondly, I wish to reiterate Béteille's (1998) contention that religion has a dual role in India, namely, that of uniting and also dividing people around the country.

4.1.4 Gender

Gender is another important basis of social difference and hierarchy in contemporary Indian society. Despite the principle of gender equality having been written into the Indian Constitution over fifty years ago, deep-rooted patriarchal structures continue to circumscribe the lives of women and girls (Kapadia, 2002; Agarwal, 1994; Drèze and Sen, 2002; Desai and Krishnaraj, 2004; Ganguly-Scrase, 2000; Bose, 1999). Following Independence, the Indian state sought to advance the interests of women by way of new bureaucracies, policy directives

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to Rama on the site. In the months that followed the Babri Masjid destruction, Hindus and Muslims rioted in different parts of the country, resulting in approximately three thousand fatalities and large-scale displacement of families. The violence that occurred in the state of Gujarat some ten years later, in 2002, was directly related to the Ayodhya controversy. In that year, a train carrying Hindutva activists who were returning from Ayodhya was set on fire by Muslims in the Gujarat city of Godhra, killing fifty-odd passengers. In response, Hindus in Ahmedabad and other places in Gujarat attacked Muslims, burning homes, looting property, and killing about two thousand. It is widely believed that the state-level BJP government in Gujarat at the time was complicit in the bloodshed. As such, Ayodhya resonates with many Indians today for divergent reasons. Depending on one's perspective, Ayodhya represents a major symbolic victory in the cause of aggressive Hindu nationalism, or else a direct assault on Muslims and the very principle of secularism in India (Corbridge and Harriss; 2000; Jalal, 2005; Davis, 2005).

in the Five Year Plans, and various welfare-oriented programs and schemes; from the late 1970s onwards, the women's movement began to challenge male-dominated ideology and institutions and advocate for social and legislative reform (Ganguly-Scrase, 2000; Forbes, 1996; Nussbaum, 2000; Baruah, 2005). However, social change has been slow and the persistence of major disparities between men and women attests to a profound failure of development (Drèze and Sen, 2002). Over the past several decades the position of some sections of the female population, notably the educated, urban middle-class, has improved and more women have entered the professions and held political office than ever before (Gore, 2003). However, for the vast majority of Indian women – agricultural labourers, lower castes, tribal peoples, the urban poor and even many of the higher castes – unequal gender relations remain salient in the social order and perpetuate their subordinate status and oppression (Kapadia, 2002; Desai and Krishnaraj, 2004; Ganguly-Scrase, 2000; Bose, 1999; Forbes, 1996).

The most extreme aspect of India's gender gap is its female-to-male sex ratio which, at approximately 930 females for every 1000 males, is one of the lowest in the world and attributable mainly to belief systems and practices that favour boys over girls[9] (Drèze and Sen, 2002; Bhat, 2002). Other national-scale indicators, such as education level, literacy, labour force participation, wage earnings, food consumption, access to medical care, and property ownership, similarly attest to women's disadvantaged position relative to men (Ganguly-Scrase, 2000; Forbes, 1996; Drèze and Sen, 2002). In accordance with the enormous social diversity of India, though, gender structures are not homogeneous throughout the subcontinent. In the large north Indian states that were under Aryan colonization (Uttar Pradesh, Bihar, Madhya Pradesh and Rajasthan), patrilineal and patriarchal norms[10] underlie highly unequal gender relations, rigidly defined roles for women, and exceptionally low survival chances for girls (Drèze and Gazdar, 1997; Drèze and Sen, 2002; Ganguly-Scrase, 2000; Seth, 2001). In

[9] The female-to-male (FTM) sex ratio in India has fallen fairly steadily during the twentieth century, from 0.97 in 1901 to 0.933 in the 2001 census (Drèze and Sen, 2002). For the period from 1901 to 1991, the decline in FTM sex ratio represents an estimated 21 million 'missing' females (Bhat, 2002). The lower survival rate of girls is attributed to widespread preference for sons, neglect of girls in intra-household allocation (especially in terms of nutrition and health care), the practice of female infanticide in some parts of the country, and sex-selective abortion (Nussbaum, 2000; Drèze and Sen, 2002). Dowry deaths, property-related murders, and sex trafficking in women and girls also contribute to the reduced sex ratio (Kelkar, 2005).

[10] Important aspects of the more patriarchal north Indian society include: strong son preference, neglect of female children in inter-household allocation of resources, *purdah* (the practice of female seclusion), low female labour-force participation, high female illiteracy, very limited female property rights, and sharp separation of married women from their natal families and kin (Drèze and Sen, 2002).

comparison, south India, which has a heritage of Dravidian culture, as well as areas of the northeast characterized by matriarchal and matrilineal traditions, tend to be less male-dominated (Kapadia, 2002; Ganguly-Scrase, 2000; Seth, 2001; Drèze and Sen, 2002). The southern state of Kerala, in particular, is well-known for its more egalitarian gender relations and higher valuation of women[11] (Kodoth and Eapen, 2005; Drèze and Sen, 2002).

Notwithstanding the broad regional variation in gender relations, the Indian family is a patriarchal structure across all castes, classes and religious communities (Yadav and Mishra, 2003; Desai and Krishnaraj, 2004; Seth, 2001; Ahmed-Ghosh, 2004). In the dominant ideology, marriage continues to be viewed as important for girls and it is through marriage that a woman, as the bearer of children and, crucially, sons,[12] and as the family caregiver, forms her adult identity and acquires respect within her household and in wider society (Karlekar, 2004; Ahmed-Ghosh, 2004; Thapan, 2003; Uberoi, 2004). The ideal of the Indian woman as a devoted, dutiful, self-sacrificing wife and mother is valorized in traditional mythology and widely reinforced in the media and education system (Desai and Krishnaraj, 2004; Forbes, 1996). Thus, the socialization of Indian girls emphasizes their roles as future wives and mothers (Ahmed-Ghosh, 2004; Uberoi, 2004; Ramu, 2003). As Ahmed-Ghosh (2004) has observed, women's honour or prestige in the subcontinent is typically based on subservient, relational roles, as opposed to male-oriented status derived from inherent worth, autonomy or power. Other ways in which patriarchal norms mould the Indian family include the vesting of authority in the senior male member,[13] differential inter-household allocation of resources[14] between males and females, and the gender division of labour delineating men as income earners (termed productive work) and women as responsible for domestic work and child care

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[11] Women in Kerala have made significant gains in terms of educational attainment, health and life expectancy, and face fewer restrictions regarding employment and property ownership. The higher value accorded to Keralite females is also reflected in the state's above-unity sex ratio, (i.e., females outnumber males) (Kodoth and Eapen, 2005; Drèze and Sen, 2002).

[12] Sons are desired and valued over daughters in India for a number of reasons, including the perpetuation of the male lineage and inheritance, the potential economic contributions of sons to the family, and the responsibility accorded to sons to provide for the welfare of the aging parents and to perform the father's funeral rites (Ahmed-Ghosh, 2004). Girls, on the other hand, are often considered an economic liability because their education does not yield any benefit to the natal family, and weddings and dowry are expensive (Ramu, 2003; Ahmed-Ghosh, 2004).

[13] In general, the senior male member of the Indian family has ultimate authority and is considered the head of the household. This would be the husband in a nuclear family and the eldest male member in an extended family (often the father of a married son living under the same roof, as occurs in the traditional, patri-local after-marriage pattern of residence when the new bride moves in with the groom and his parents).

[14] It is fairly common in lower-income Indian families with limited resources, and even among middle- and upper-income groups, for boys to receive preferential access to food, clothing, schooling and medical care relative to girls (Drèze and Sen, 2002; Ahmed-Ghosh, 2004; Forbes, 1996).

(termed reproductive work) (Karlekar, 2004; Uberoi, 2004; Ahmed-Ghosh, 2004; Drèze and Sen, 2002).

Women's opportunities for employment and income generation in India are seriously hampered by the gender division of labour, as well as cultural norms in many parts of the country that confine them to agriculture and home-based industry (Seth, 2001; Ramu, 2003). Nonetheless, the economic input of women in India is substantial and often essential, as a primary or secondary income source, for family survival (Bose, 1999; Seth, 2001). In addition, the capacity to earn an independent income is deemed to contribute to women's self-esteem and improved status within the family and society (Drèze and Sen, 2002; Thapan, 2003; Seymour, 1999; Seth, 2001). Studies also show that many Indian women are involved in unpaid, voluntary activities in their villages or urban settlements, usually revolving around collective or community goods such as forest resources, water, education, and health care (e.g., Jayal, 2004; Dahiya, 2003; Gupta, S., 2003), exemplifying Moser's (1993) conceptualization of women's triple roles – reproductive, productive, and community managing. Various scholars contend that women in India who take on productive and community managing work are invariably expected to fulfill their regular domestic obligations and, as a result, frequently pay a heavy price in terms of an even longer working day and other difficulties[15] (Kelkar, 2005; Yadav and Mishra, 2003; Thapan, 2003; Seymour, 1999).

The literature further suggests that the gender hierarchy tends to be less pronounced in poor, lower-caste families than in the upper-income strata of the Indian population (Drèze and Sen, 2002; Kapadia, 2002; Seymour, 1999). The more egalitarian gender relations among the poor are mainly attributed to the productive contributions of women, and concomitant recognition of men that they are dependent in part on their wives' earnings (Seymour, 1999; Ramu, 2003; Kapadia, 2002). In general, women in poor families face fewer restrictions on their physical mobility and choice of jobs, and receive greater cooperation from male family members around the gender division of labour (Drèze and Sen, 2002; Seymour, 1999; Ganguly-Scrase, 2000; Kapadia, 2002). High-caste women, on the other hand, have historically been subject to greater male control due to cultural norms associated with caste

[15] Other problems encountered by Indian working women include the conflicting demands of multiple roles, heavy work load, fatigue and poor health, feelings of guilt owing to neglect of children and home, sexual harassment at the workplace, and difficulties related to transportation and communication (Yadav and Mishra, 2003).

purity and female sexuality,[16] which relegated women to the reproductive sphere and limited their mobility in public (Ganguly-Scrase, 2000; Desai and Krishnaraj, 2004; Ramu, 2003). The persistence of patriarchal ideology is such that, even today, the status of many higher castes is defined in terms of the degree of male domination and female submissiveness within the caste (Kannabiran and Kannabiran, 2003). At the same time, the typically less oppressive gender relations of the lower castes are not immutable for the reason that patriarchal norms of the upper castes diffuse downward in the social order through the Sanskritization process, a prime example being the practice of dowry (Drèze and Sen, 2002; Srivastava, 2001).

Patriarchal structures are manifest in violence towards women, which is a serious issue in India as also in many countries worldwide (Kelkar, 2005; Verma and Collumbien, 2003; Kapadia, 2002; Karlekar, 2004; Martin et al., 1999). In the Indian context, violence against women in the home, workplace and in public is reputedly increasing, though the full extent of the problem is difficult to gauge because much of it is unreported and invisible (Mukherjee et al., 2001; Kapadia, 2002; Karlekar, 2004; Desai and Krishnaraj, 2004). Domestic violence[17] is believed to occur in all segments of Indian society (Srivastava, 2001; Karlekar, 2004; Seth, 2001). This form of violence comprises not only physical acts of aggression, but also verbal abuse, mental cruelty, denial of food and money, excessively long hours of labour, confinement, rape, and abandonment (Ahmed-Ghosh, 2004; Karlekar, 2004; Srivastava, 2001). Dowry is a major factor in domestic violence and dowry-related violence represents the leading cause of death among young married women[18] (Karlekar, 2004; Ahmed-Ghosh, 2004). The impacts of domestic violence include physical injury, psychological trauma, loss of self-esteem, medical costs, lost productivity, diminished quality of life, and adverse effects on children. As well, acts of violence in public spaces, and fears thereof, reduce women's mobility, economic opportunities, and participation in community life (Kelkar, 2005; Karlekar, 2004). I raise the issue of gender-specific violence here as it is relevant to the study

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[16] According to traditional high-caste norms, the purity of the caste is highly valued and control of women's sexuality is considered vital to maintain its integrity. The perceived danger of lower-caste men gaining sexual access to higher-caste women underlies *purdah* (female seclusion) and other practices that control female lifestyle and mobility (Ganguly-Scrase, 2000; Desai and Krishnaraj, 2004).

[17] While domestic violence is often thought of as wife abuse, the term also refers to violence directed at children, aging parents and domestic servants (Ahmed-Ghosh, 2004; Karlekar, 2004). My utilization of the term is primarily in connection with wife abuse.

[18] Dowry deaths refer to young married women being beaten or burnt to death, or pushed to suicide by their in-laws because of insufficient dowry (Ahmed-Ghosh, 2004). The Indian state has attempted to discourage the practice of dowry through the Dowry Prohibition Act, 1961 and later amendments, but legislation has been an outright failure (Seth, 2001). In recent years, dowry has become more widespread and dowry demands have climbed with economic liberalization and growing consumerism (Ahmed-Ghosh, 2004).

community and has, moreover, implications for social capital and collective action which will be discussed in the later empirical chapters.

Lastly, although it is contended in the literature that gender relations are disiimilar in rural and urban areas (e.g., Srinivas, 1978), comparatively few studies have explored this theme. Moreover, reflective of the rural bias in Indian sociological research, the role of gender in the urban context is rather ambiguous. As noted above, numerous scholars argue that urban, educated, middle-class women have achieved more egalitarian gender relations over the past several decades yet, at the same time, the gender hierarchy has not changed substantially for most women in the country (Ganguly-Scrase, 2000; Yadav and Mishra, 2003; Kapadia, 2002; Gore, 2003). Nonetheless, urban areas could conceivably promote more equal gender relations amongst other segments of the population by means of greater educational opportunities and occupational diversity (relative to rural settings), both of which increases women's capacity to become income earners and, thereby, enhances their status vis-à-vis men. As well, increased opportunities for physical mobility and social interaction in urban areas would likely provide more autonomy to women.

4.2 Civil Society

This section outlines the contours of India's civil society which, like the fundamental social structures discussed above, relates to the integration component of Woolcock's framework. In India, the term "civil society" has gained currency only recently (Béteille, 2003; Tandon, 2002). The main impetus for the emergent interest in civil society has been widespread disenchantment with the post-independent state that has intensified over the past several decades (Gupta, D., 2003; Béteille, 2003; Jayal, 2001; Sharma, 2002). The concept of civil society does not convey a consistent meaning or weight in Indian academic circles (Béteille, 2003; Tandon, 2002); on the contrary, the notion is contested, probably more so than in the western discourse. Whereas some scholars are dubious about the applicability of the civil society construct to the Indian context, others have readily embraced the idea (Bhattacharyya et al., 2004; Robinson, 2003; Tandon, 2002; Oommen, 2003). Exponents of civil society in India generally link the notion with reform of an oppressive state, entailing substantive democratization and transformation of citizen-state relations, particularly in regards to historically marginalized groups (e.g., Jayal, 2001; Béteille, 2003; Tandon, 2002; Sharma, 2002). Within this broad normative view, various Indian theorists emphasize different

dimensions of the civil society project, such as citizen empowerment and voluntary action (e.g., Tandon, 2002), open and autonomous intermediary institutions (e.g., Béteille, 1998; 2003), new social structures based on equality of status (e.g., Chandoke, 1995), and state protection of citizenship rights (e.g., Gupta, D., 2003).

At the same time, academic enthusiasm for civil society is far from universal in India. Qualms about the civil society construct relate to the perception that, as an "imported" (i.e., western) framework, it is inappropriate for Indian social practices and realities (Acharya, 1997). The neo-Tocquevillean version of civil society, in particular, has evoked resistance in the country. It is argued that India's entrenched social structures, such as caste, kinship, gender and religion, severely constrain the autonomy and free association of individuals privileged in the western discourse (Bhattacharyya et al., 2004). In addition, the idea of civil society in India is not usually equated with the exercise of citizenship, as is premised in the neo-Tocquevillean model, for the reason that social inequalities compromise opportunities for meaningful participation in the public sphere for the vast majority of the population (Gupta, D., 2003). Some Indian theorists, in fact, are suspect of any "modern" forms of civil society (as well as the state), which they believe tend to be captured by the more affluent and elites (e.g., Chatterjee, 1997); this perspective associates civil society with "tradition" and prescribes the return to a customary moral order that supposedly existed in India's villages before the advent of the state (Gupta, D., 2003). Of course, the scholarly work on Indian civil society is much more complex than I can present here; the main point I wish to make is the divergence of normative understandings.

The literature maintains that India's civil society is organically related to its larger society, that is, patterns of association, both quotidian and more formal, generally conform to the major social divisions discussed earlier (e.g., caste, gender, class, religious affiliation) (Sharma, 2002; Heller, 2000; Bhattacharyya et al., 2004; Oommen, 2003). Social relations within civil society, in other words, feature an abundance of within-group bonding social capital and a relative lack of bridging social capital between dissimilar groups. Consistent with the theoretical propositions about bonding social capital, various scholars assert that, along with the benefits of these strong, dense ties for members of specific groups, such segmentation is divisive and has major downsides for wider Indian society, including reinforcement of narrow identities and interests, particularism, localism, patriarchy and class domination (Heller, 2000; Gore, 2003; Sharma, 2002). The cellular and often ascriptive basis of

associational life, moreover, tends to preclude the development of cross-cutting social relations associated with bridging social capital (Sharma, 2002; Heller, 2000). The deficit of bridging relations in Indian civil society, in keeping with social capital theory, is thought to constrain horizontal sharing of information and resources, aggregation of interests, and collaboration between different groups in pursuit of common goals (Sharma, 2002; Heller, 2000). The lack of bridging social capital is also considered a barrier to the evolution of a Putnam-like civic community in the country (Sharma, 2002). In this sense, social capital in India has been called "shallow" (Sharma, 2002; 93).

Indian civil society is further characterized as eclectic, encompassing the entire definitional spectrum as noted above (i.e., traditional and modern, formal and informal, political and non-political, small-scale and broad-based) (Tandon, 2002; Mehta, 1999). Since the late 1970s, the level and scope of organized civil society activity has burgeoned in India (Jayal, 2001). This sector is comprised of many different actors that are engaged in a wide range of issues, including rural development, land reform, urban poverty, environment, science and technology, education, health care, the women's movement, human rights, labour, culture, and other areas (Shah, 2001; Jayal, 2001; Tandon, 2002; Mehta, 1999). For the most part, the associations devoted to broad-based issues, primarily NGOs and popular movements, are viewed as for the "common good," though there can be negative externalities, as with Hindutva. In addition, many organizations are formed around the particularistic interests of groups or communities defined by locality, occupation, ascription, or some other basis of constituency (Tandon, 2002). Caste associations, religious charities, and tribal peoples' organizations are examples of ascriptive affiliation. Overall, the literature on civil society in India is predominantly oriented towards the activities of NGOs and social movements, with less emphasis on informal structures and CBOs. Consequently, the nature of grassroots civil society in settlements, such as the study community, is not well-documented.

Although Indian civil society is described by some as "rich" or "vigorous" in the literature, quantitative data suggest a rather low density of associational interaction across the country. The actual size of the civil society sector is not known with any confidence (Mayer, 2004; Jayal, 2001); various estimates place the total number of associations in India at as few as 50,000 to 100,000 to as many as two million (Jayal, 2001). This large uncertainty reflects the absence of a comprehensive database, lack of definitional consistency, and the ephemeral nature of many organizations (Chhibber, 1999). Several national-level surveys conducted

during the 1990s and early this decade, however, consistently show that level of associational membership in India is low – about 15 % at most.[19] At around 15 %, India's associational level ranks at or near the bottom relative to other democratic countries.[20]

The impression of the "weakness" of Indian civil society based solely on associational affiliation is disputed, however (Blomkvist, 2001). Various scholars contend that voluntarism is intrinsic to Indian culture and dates back to ancient times (Sen, 1999; Tandon, 2002). In traditional society, informal civic structures were active in fields such as education, health care and cultural promotion, and in crisis relief (Sen, 1999). It was not until the colonial period that the first "modern" indigenous forms of voluntary organizations were established (Sen, 1999). Even today, a major part of Indian civil society is informal (Tandon, 2002; Varshney, 2001). In the villages and small towns of India, especially, informal yet locally acknowledged social structures are the norm and formal associations are uncommon (Varshney, 2001; Krishna, 2002). As such, it is argued that quantitative associational data are misleading in the Indian context for the reason that only formal associations are represented, leaving out informal networks that are often significant (Blomkvist, 2001; Serra, 2004; Krishna, 2002). The Indian associational figure of 15 %, moreover, does not capture the large numbers of people involved in various social movements across the country. Another interpretation is that pervasive social inequality accounts for the overall lack of associational life in India, in the sense that associational capacity of disadvantaged groups, of which there are many, is fairly low (compared to more affluent groups). An important implication of India's low associational density is that, where there are few intermediate organizations between society and the state, citizens tend to look to elites and the state to address their needs and concerns, which fosters clientelistic relations similar to what Putnam found in southern Italy (Chhibber, 1999).

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[19] Based on 1991 post-election survey data, Chhibber (1999) found that 13 % of Indians reported belonging to one or more associations. The breakdown of the 13 % figure was 4 % trade unions, 2 % caste and religious associations, 2 % neighbourhood and peasant organizations, and 4 % other organizations (Chhibber, 1999). Similarly, a 1996 post-election survey showed that 15 % of Indians belonged to at least one association (Mitra and Singh, 1999). More recently, a 2001-02 survey conducted by a team of researchers from Bangalore University, Ohio State University and University of California at Berkeley, determined that the level of associational membership in India was only 8 % (Chhibber et al., 2004). Corroborating the 1991 data, the 2001-02 survey revealed that about 2 % of Indians were members of caste or religious organizations (Chhibber et al., 2004).

[20] In a comparison of associational membership in democratic countries, based on the 1991 Indian post-election data and comparable World Values Survey data for other countries, Chhibber (1999) determined that India ranked last, at 13 %, while Iceland topped the list at the 90 % (followed by Sweden, Netherlands, Norway and Denmark, at 85 %, 84 %, 82 % and 81 %, respectively).

4.3 The Indian State

This part discusses the Indian state,[21] which corresponds to Woolcock's macro-level social capital concept of institutional integrity. To begin, the Indian nation-state is lauded in the literature for having enabled democracy to take roots in what many believed was inhospitable soil and having endured as a functional entity (Kohli, 2001; Khilnani, 1997; Frankel, 2000). Given the initial conditions at the time of independence in 1947 (i.e., a low-income economy, endemic poverty and illiteracy, and enormous cultural diversity), the forging of modern India is widely considered a remarkable achievement (Kohli, 2001; Frankel, 2000). In light of India's deeply-ingrained social hierarchies the Indian constitution, which called for a new social order based on principles of individual equality and social justice for historically marginalized groups, is viewed as progressive if not revolutionary (Frankel, 2000; Gore, 2003). Apart from the constitution, the Indian state includes other hallmark democratic institutions, notably universal suffrage, regular elections, a competitive political party system, a free press, an independent judiciary, and civilian control of the military (Sharma, 2002; Heller, 2000).

Except for the National Emergency in 1975-77, during which civil and political rights were suspended in the country, India's democratic institutions have proven robust (Heller, 2000; Kohli, 2001; Frankel, 2000; Sharma, 2002). The logic of India's democratic institutions has facilitated over time a "democratic deepening" in terms of increased political mobilization of formerly subordinate groups and concomitant erosion of traditional upper caste/class dominance, such that the Parliament, State Assemblies and local elected bodies have become more representative of society as a whole (Sharma, 2002; Khilnani, 1997). In this sense, notwithstanding the rise of Hindu nationalism, Indian democracy is viewed with optimism (Khilnani, 1997).

Whereas the formal, procedural aspects of the Indian state are generally acclaimed, its substantive dimensions have been more and more called into question, however (e.g., Drèze and Sen, 1995; 2002; Jayal, 2001; Heller, 2000; Sharma, 2002; Saberwal, 1996; Narayan, 2003; Herring, 1999). Borrowing from the conceptual distinctions of Drèze and Sen (2002), academic critique of the Indian state has focused not on its core democratic ideals or

[21] The term "state" as employed here refers to the formal structure of the Indian political system at the national and sub-national levels (i.e., central, state and local governments) and includes the various arms of government, e.g., executive, legislative, bureaucracy and judiciary.

institutional framework but, rather, its quality of democracy or democratic practice. Thus, the state's weak commitment to broad-based development (e.g., failure to substantially reduce poverty, inability to foster universal conditions of citizenship, poor provision of basic services), is understood as a deficit between formally espoused values and actual efforts or practice in that direction (Béteille, 1998; Drèze and Sen, 2002; Heller, 2000). Various theorists have conceptualized the Indian state in different ways, including the "soft" state (compromised or otherwise unable to implement its policies), the "overextended" state (burdened from sheer multiplicity of demands), the "structurally imprisoned" state (constrained by mass poverty), the "captured" state (dominated policy-wise by elites), and the "grace and favour" state (monopolistic and rent-seeking) (Herring, 1999; Chandra, 2004). While each of these explanations emphasizes certain aspects of the Indian state that have validity, the common denominator is the inadequacy of democratic practice.

Democratic practice is closely related to governance, that is, the manner in which society guides itself.[22] In India, the state has a major impact on society and hence figures prominently in the shaping of governance; on the whole, the Indian state is deemed to have limited capacity for "good governance" (Jayal, 2001; Sharma, 1996). To elaborate, the Indian bureaucracy is frequently characterized in terms of: highly centralized structures; administrative complexity; lack of accessibility, transparency and accountability; arbitrariness in functioning; inefficiency; high costs of operation; low standards of service; and opportunism and corruption (Saberwal, 1996; Gore, 2003; Jayal, 2001; Tandon, 2002; Sharma, 2002; Heller, 2002; Narayan, 2003; Drèze and Sen, 2002; Mander, 2003). Of course, operational effectiveness and work cultures are variable across government departments, localities and states; however, the broad pattern of dysfunctionality that exists, in one form or another, is indicative of problems with governance.

Difficulties associated with provision of public services in India are usually blamed on the monopolistic nature of many public sector institutions, absence of institutional sources of motivation, and the overall lack of accountability in the system (Paul, 2002; Paul et al., 2004; Devarajan and Shah, 2004; Narayan, 2003; Drèze and Sen, 2002; Das, 2001). Generally low standards of public services, for instance, are ascribed to the lifetime security that most government employees enjoy, irrespective of actual performance and the level of public

[22] This meaning, drawing from Jayal (2001), thus represents a process involving all actors in society, as opposed to the formal structures of government through which the process is realized.

satisfaction (Paul, 2002; Drèze and Sen, 2002). Nonetheless, the bureaucracy is not solely responsible for the mode of governance in the country; other arms of the state, such as the political society and judiciary, are important actors, as is civil society.

Political society (political parties and their leaders) in contemporary India is explained in the context of a system of patronage-democracy, whereby the state has monopolistic or near-monopolistic control over scarce public resources and elected officials have considerable discretion in policy implementation and allocation of resources (Chandra, 2004). Although the concept of patronage-democracy is most often used in the political sphere, the basic structure of power differentials is paralleled in the bureaucracy. Two variants of patron-client relations in the Indian political realm are identified in the literature. In the first type, as alluded to earlier in the section on social structures, politicians frequently attempt to build their constituencies on the basis of essentialized identities of caste, religious affiliation, language, place of origin, and other ascriptive ties (Jayal, 2001; Gore, 2003; Sharma, 2002; Béteille, 2003; Heller, 2000; Narayan, 2003), which are sometimes equated with ethnicity.

In the second version of patronage, which is more typical of local politicians and heterogeneous, low-income urban communities in India, political appeals are less identity-based and more locality-based. By and large, residents of such communities exchange their votes, usually en masse as a "vote bank," in return for a politician's promise to provide favours such as protection from eviction or much-needed infrastructure and services (Gill, 1998; Mitra, 2003; Shenk, 1989). This pattern is prevalent in urban India where oftentimes community members have illegal or questionable tenure status or, having security of tenure, lack access to the bureaucracy (Schenk, 1989). Accordingly, residents vote strategically for whom they think can grant them the most favours (Wade, 1989). In both types of patronage, politicians invariably present themselves as "champions" of their constituency (Sharma, 2002; Gill, 1998). According to social capital theory, the politician, for better or for worse, represents a form of linking social capital to poor communities. Nevertheless, patron-client relations in India are viewed in the literature as essentially dependency-creating and an impediment to the development of horizontally-based relations, such as those built around mutual socio-economic interests (Schenk, 1989).

Corruption, which is generally understood as the "misuse of public office, power or authority for private gain" (Mander, 2003; 147), is a prominent theme in scholarly work on the Indian state and has particular relevance to my research in Sultanpuri. There is wide agreement

that corruption pervades the political society and bureaucracy at all levels (Wade, 1989; Gill, 1998; Singh, 1997; Das, 2001; Mander, 2003; Paul, 2002; Gore, 2003; Sharma, 2002; Narayan, 2003; Drèze and Sen, 2002; Robbins, 2000). This assessment is substantiated in the annual rankings for India under Transparency International's Corruption Perception Index.[23] Regarding Indian politicians, practices such as electoral fraud, misappropriation of public resources, bureaucratic interference, collusion with government officials or the private sector in illegal activities, and criminal links are used to buy political support and for personal enrichment (Das, 2002; Narayan, 2003; Gore, 2003; Gill, 1998; Drèze and Sen, 2002). Corruption in the Indian bureaucracy, on the other hand, generally involves the abuse of public authority or resources for the purpose of illicit earnings or other favours (Gill, 1998; Paul, 2002; Wade, 1989; Robbins, 2000). Whether corruption occurs in political society or in bureaucratic institutions, or in the nexus between the two realms, it is maintained that, in the Indian scenario, potential rewards are large and the risk of being caught and punished is small (Mander, 2003; Singh, 1997). This is not to say, however, that all public officials behave the same way; many frontline service providers do provide quality service and carry out their duties with personal integrity, often in difficult situations (Devarajan and Shah, 2004). Nonetheless, the problem of corruption is systemic in India.

Although it is claimed that corruption can be beneficial in some instances (e.g., a bribe that cuts through bureaucratic red tape) (Pillai, 2001), most accounts stress that it acts against the wider interest. The many negative, macro-level impacts on Indian society include: perpetuation or widening of existing social inequalities (Johnston, 1989; Drèze and Sen, 2002); adverse economic effects (e.g., lost productivity, indirect costs of unreliable services, siphoning off of public spending on the poor) (Robinson, 1998; Paul, 2002; Drèze and Sen, 2002); and undermining of state legitimacy, the rule of law, and policy goals (Drèze and Sen, 2002; Johnston, 1997; Paul, 2002).

Whereas high-level graft and scandals are a fact of Indian life and have far-reaching effects, it is the petty or everyday forms of corruption that more directly impact on the poor (Paul, 2002; Gill, 1998; Narayan, 2003). Usually, petty corruption is extortionary in nature (i.e., public officials put pressure on citizens to pay extra money or provide favours) and citizens comply (i.e., pay bribes) out of fear of harassment, delay or other undesirable

[23] Under Transparency International's Corruption Perception Index for 2006, India scored 3.3 out of 10 (higher scores correspond to less corruption), placing well down the list (at number 70) of countries surveyed (Tranparency International, 2006).

consequences (Narayan, 2003; Paul, 2002). In Indian cities, for example, people frequently have to pay bribes to obtain services in "free" government hospitals, to file a complaint at a police station, to get utility connections or, in the case of vendors and hawkers, to be left alone (Paul, 2002; Gill, 1998). In another type of corruption, which pertains to neglect of official duty, high staff absenteeism at government-run schools and health facilities is prevalent in India (Gill, 1998; Devaraj and Shah, 2004; Paul, 2002). Contemptuous treatment of the public by frontline service providers, which also falls within the definition of corruption, is also not uncommon (Goetz and Jenkins, 2005; Paul, 2002). In all of these aspects, the literature maintains that the poor are affected more than the middle classes, on account of their increased vulnerability to extortion, the need to pay a higher proportion of their incomes on bribes, their relatively lower capacity to complain to the authorities, and their lack of "exit" options (Mander, 2003; Goetz and Jenkins, 2005; Paul, 2002; Paul et al., 2004).

4.4 State-Society Relations

Academic discussion of contemporary relations between the state and society in India, which relates to Woolcock's idea of synergy, is undeniably complex yet revealing about its salient characteristics. The theme of alienation underlies much of the discourse, with respect to how most Indians view or relate to the state, and also in the reciprocal relation of the Indian state to the populace. Ordinary Indians tend to regard the state as distant and unresponsive to their needs and interests and even oppressive or hostile (Bhattacharyya et al., 2004; Serra, 2004; Paul, 2002; Tandon, 2002; Schenk, 1989). Such alienation is at times couched in terms of widespread cynicism towards those in positions of power, and even disgust or apathy towards the political process in general (Gore, 2003; Narayan, 2003; Sharma, 2002). For many poor and marginalized groups, the sense of optimism in the early years following independence has eroded; the Indian state has lost legitimacy over the past several decades, mainly due to its shortcomings in democratic practice (Sharma, 2002; Tandon, 2002). In India, the alienation of the state from society is multi-faceted as well; an important aspect of this estrangement is the dominant, top-down model of governance, in which power is concentrated in the hands of the ruling elite and the masses essentially treated as objects of the development process or passive recipients ("beneficiaries") of government programs (Bardhan, 1999b; Tandon, 2002; Chandhoke, 2005; Jayal, 2001).

Reflective of the sizable gap between society and the state, surveys consistently show that Indian citizens across all class categories typically have fairly low levels of trust in their public officials and institutions. For instance, a nation-wide survey carried out in 1996 (sample size 10,000) found that less than 40 % of respondents had a "great deal of trust" in government (all levels) (Mitra, 2001). In a second survey undertaken in Delhi prior to the 2003 state elections (sample size of 14,000), only 10 % of respondents said that politicians could be trusted and another 59 % felt that politicians could be trusted somewhat (Hindustan Times, 2003a). From the same Delhi survey, a mere 8 % felt that the bureaucracy was completely trustworthy, whilst 53 % expressed that the bureaucracy was somewhat trustworthy (Hindustan Times, 2003b). The basic lack of trust towards the Indian state has implications for collaborative relations between communities and local governments, which I will expand on later in my discussion of Sultanpuri. While the professed lack of trust towards politicians and bureaucrats could be seen as indicative of estrangement or hostility towards the state, it could also be interpreted more positively as citizens having increasing sophistication about how the state actually works or, perhaps, *should* work which, in turn, could be argued is healthy in a democratic system.

The notion of citizenship, furthermore, is prominent in the scholarly work on state-society relations in India. The literature emphasizes that citizenship, understood as meaningful participation in the social and political life of the country,[24] is limited for large segments of the population (Heller, 2000; Jayal, 2001; Elliot, 2003; Gupta, D., 2003; Drèze and Sen, 2002). Constraints to active citizenship in India are understood as having historical and structural roots, yet generally not attributed to the absence of formal political rights in the post-independent period. The very idea of citizenship is a departure from Indian traditions since, for millennia, the social universe for the vast majority of people was bounded by clan, caste and village, and interaction with wider society was minimal (Béteille, 1998; 2003; Saberwal, 1996). From a contemporary standpoint, it is argued that the practice of citizenship is contingent on relative equality of status and power between individuals or groups in society (Gupta, D., 2003; Drèze and Sen, 2002). In this regard, consensus exists that profound social and economic inequality in India has precluded fulfillment of universal conditions of citizenship; extensive poverty and entrenched social structures such as caste subordination,

[24] This meaning, in which citizenship is regarded as a relation (amongst citizens in civil society, and between citizens and the state) as opposed to a right, is borrowed from Heller (2000; 484).

clientelism and patriarchy have severely compromised the exercise of citizenship (Drèze and Sen, 2002; Gupta, D., 2003; Heller, 2000; Jayal, 2001).

Thus, in the case of many disadvantaged groups, citizenship is undermined by marked differentials in power relative to others, as well as asymmetries in opportunities for participation and inherent capacity to participate (Drèze and Sen, 2002). In the latter vein, India's high illiteracy rate is viewed as a major barrier to informed and effective participation (Béteille, 1998; Narayan, 2003; Drèze and Sen, 2002; Paul, 2002; Serra, 2004).

Apart from social inequality, India's immense cultural diversity is also deemed a constraint to citizenship, in that a requisite level of commonality between groups (e.g., lifestyles, expectations), which might facilitate dialogue, cooperation or conflict resolution, is not assured (Gupta, D., 2003). Particularism based on caste and other ascriptive identities has the potential to detract from a sense of "national" citizenship (Sharma, 2002). Finally, the character of the Indian state itself, for reasons mentioned earlier (e.g., ineffectiveness, arbitrariness, lack of transparency and accountability, corruption problems), is considered an explanation of disengagement or low-intensity citizenship. The state, in other words, is culpable for the pervasive alienation from the political process, and the lack of progress towards reducing the inequality within society that diminishes citizenship (Tandon, 2002; Narayan, 2003; Paul, 2002; Drèze and Sen, 2002).

Civil society is subordinate to the hegemony of the state in India; however, because civil society is heterogeneous, relations with the state are differentiated (Jayal, 2001; Tandon, 2002). As mentioned above, the bulk of the Indian civil society literature focuses on NGOs and social movements, rather than on informal networks and CBOs. Hence, the nature of state-society relations concerning informal networks and CBOs is somewhat ambiguous; the pattern of interaction with the state involving NGOs and social movements, by comparison, is more evident. NGOs, for instance, are frequently portrayed as active partners with the state in development projects in India; this role has expanded since the onset of structural adjustment and economic liberalization in the early 1990s, as government programs were increasingly transferred to NGOs for implementation (Kundu and Maitra, 1999; Jayal, 2001; Sen, 1999). In addition to this public service contractor role, NGOs carry out a range of welfare- and empowerment-oriented programs that government is unwilling or unable to provide (Sen, 1999). While state-NGO relations are generally benign, NGO activities that are empowerment-oriented or critical of the state are less supported or tolerated (Sen, 1999; Jayal, 2001). Social

movements in India, on the other hand, invariably have conflictual relations with the state. The state tends to view challenges to the status quo and contesting of its authority in negative terms and is consequently unreceptive, if not repressive or hostile, in its response (Mohanty, 2004; Jayal, 2001; Shah, 2001).

On the whole, the literature maintains that, while governance-related problems in India are profound and have reached, according to some scholars, a crisis point (e.g., Heller, 2000; Saberwal, 1996), the situation is not intractable (Drèze and Sen, 2002; Tandon, 2002; Narayan, 2003; Jayal, 2001). The widespread dissatisfaction with the state, after all, signals the impetus for change (Narayan, 2003). To improve the process of governance in India, the basic remedy called for is the reformulation of state-society relations, entailing a more balanced sharing of power with society (Tandon, 2002; Drèze and Sen, 2002; Narayan, 2003). Considered pivotal to changing state-society relations is the enrichment of citizen participation which, in turn, is held to strengthen civil society relative to the state (Drèze and Sen, 2002; Tandon, 2002; Narayan, 2003). A robust civil society is understood as a countervailing force to the state to pressure for social and political change (Heller, 2000; Mohanty, 2004; Tandon, 2002; Narayan, 2003; Paul, 2002; Das, 2001). The Indian discussion proposes, moreover, an alternative vision of the state as more of a facilitator, and less of a provider (Tandon, 2002; Mathur, 1999; Mehta and Pathak, 1999). Under this scenario, a main virtue of civil society is seen as its potential for pluralistic or contextual approaches to development, that is, local solutions in response to local conditions and needs, as opposed to homogenized, top-down models (Tandon, 2002).

Currently, state-society relations are being redrafted in India, propelled by advocates of civil society as well as reformists within the state (Chandhoke, 2005; Jayal, 2001; Drèze and Sen, 2002). The basic thrust is towards more participatory forms of democracy which, it is argued, will result in improved governance and better delivery of public goods (Chhibber, 2004). As mentioned above, since the withdrawal of the state in the early 1990s under economic reforms, the NGO sector has assumed greater responsibility in development work. Decentralization of the state was further reinforced via the 73rd and 74th Constitutional Amendments (passed in 1992 and 1993, respectively), which delegated greater powers to local governments, namely, the *panchayati raj* in the countryside and municipal governments in urban areas. These provisions were intended to lay the foundation for increased local democracy (Kundu and Maitra, 1999; Drèze and Sen, 2002; Jayal, 2001). Recent central

government policy, notably the past several Five Year Plans, has continued along this course in explicitly recognizing the role of CBOs and NGOs (and the market) as agents of development (Chandhoke, 2005; Jayal, 2001). Indicative of the trend towards sharing of state power and authority, numerous governments across India have entered into partnerships with a host of societal actors (Jayal, 2001).

Attesting to the reformulation of state-society relations occurring in some parts of India is the empirical study by Corbridge et al. (2005) of rural eastern India (five field sites in Bihar, Jharkhand and West Bengal). The researchers utilize village-level household surveys and interviews with government officials and other key informants at the Block, District and State levels to investigate several core development functions of the state (income support, primary education provision, and legal protection). The main finding of Corbridge et al. (2005) is that improvements in governance, including greater responsiveness and accountability of the state, changes in attitude about poverty and its alleviation, and active engagement of marginalized rural people in development processes are, in fact, translating into tangible improvements for ordinary Indians at the grassroots in the locales studied. Having conceptually and methodologically focused on the "everyday state" (how citizens view, as well as experience the state), the authors find evidence of meaningful social change, as opposed to mere government hype. Based on further analysis of the Indian scenario, Corbridge et al. (2005) argue, moreover, that similar innovations in governance structures in various other places around the country are contributing, overall, to the steady decline in poverty rates and increased human well-being, as reflected by steadily improving national Human Development Index scores since the early 1990s. Acknowledging, however, that the good governance agenda has been more successful in some areas than others, Corbridge et al. (2005) assert that new spaces of empowerment are being created in India, increasingly so for the poorer segments of society.

It is worth noting that the shift in state-society relations thus far, while promising, represents a gradual transformation of the political culture rather than a sea change. Achievement of participatory democracy is clearly a work in progress; the transition is not without contradiction in India and some level of political resistance and bureaucratic inertia. From an academic standpoint, the new direction of governance in the country is generally considered positive, yet not without legitimate concerns. Open to question, for instance, is the assumed capacity of CBOs and NGOs (and the market) to deliver services more equitably or

efficiently than the state, as is the wisdom of state divestment of public obligations as opposed to a strategy for increasing its institutional effectiveness (Chandhoke, 2005). The sharing of public commitments with non-state actors, moreover, is perceived as problematic from an accountability standpoint (Jayal, 2001; Chandhoke, 2005). Finally, growing state dependence on NGOs in India also raises issues around the supposed autonomy of civil society and possible co-option in a technical, rather than political, approach to development – what Harriss (2001) refers to as "the anti-politics machine."

4.5 The Urban Context: A new mode of governance?

Paralleling the general situation of governance in India, academics characterize the existing system of urban governance across the country as deficient and weak (Mathur, 1999; 2000; Mehta and Pathak, 1999; Mukhopadhyay, 1999). This assessment reflects the functioning of local or municipal governments as well as other city-related bodies. Service delivery, the main purpose of local governments in India, is grossly inadequate in all urban centres due to many factors, including widespread inefficiency and systemic bias in allocation of public resources (Paul, 2002; Chaplin, 1999; Mathur, 1999; Dutta, 1999). Other common problems of local governments are the chronically weak financial base, lack of autonomy relative to higher levels of government, centralized structures, antiquated systems of management, poor quality of staff, and lack of mechanisms for participation of ordinary citizens (Kundu and Maitra, 1999; Kundu, 2001; Datta, 1999; Mathur, 1999; 2000; Mukhopadhyay, 1999; Paul, 2002).

In the major cities of India, moreover, the institutional framework is often unsatisfactory because of the sheer number of government bodies and lack of coordination. Such administrative fragmentation applies to Delhi, where myriad agencies from three different levels of government (local, state and central levels), as well as specialized agencies such as the Delhi Jal Board, are responsible for urban management (Bagchi, 2003). With respect to relations between citizens and urban authorities, the prevailing pattern is, in small and large urban centres alike, again that of alienation, i.e., popular perception of government as unresponsive, apathetic to societal interests, hostile at times, and prone to corruption (Paul, 2002; Mehta and Pathak, 1999).

The current state of urban governance is described in the literature as at a crossroads, moving away from the top-down development model that has proven unsuccessful in meeting a range of social objectives, to laying the institutional foundations of a more participatory

approach (Mathur, 2000; Kundu, 2001). The new paradigm of urban governance is envisioned as a "collaborative effort of all stakeholders in the cities' future" (Mathur, 1999; 43). Along with the government bodies having jurisdiction for urban management, key stakeholders are service providers, communities, civil society organizations, and the private sector (Jain, 2003b; Mehta and Pathak, 1999). In emphasizing the transformation of government from provider to facilitator and catalyst and the need for innovative methods of interaction and cooperation between stakeholders, the new mode of urban governance is conceptualized as people-centred planning and development, (Jain, 2003a; 2003b; Mehta, 1999). Influenced by international trends and changing views within India towards urban governance, the Government of India launched the Good Urban Governance Campaign in 2001, the cornerstone principles of which are sustainability, efficiency in delivery of urban services, equity of access to basic necessities of life and decision-making processes, transparency and accountability, and civic engagement and citizenship (Jain, 2003b).

Central to achieving these goals is the establishment and nurturing of partnerships between government bodies and the various stakeholders (Jain, 2003b; Mehta and Pathak, 1999). In this spirit the Delhi Government, for example, initiated a program called "Bhagidari: The citizen-government partnership" in 2000, which aims to improve civic services and the urban environment through the sharing of governance (Gaurav and Singhal, n.d.).

In the academic discussion of urban governance in India the meaning of participation, particularly as it pertains to the poor, has broadened beyond the conventional understanding of direct participation by communities in specific government development projects to include partnerships with government in service delivery and ongoing involvement in the public policy process (Mathur, 2000; Mehta, 1999). The rationale for participation of the poor has similarly evolved, from the largely instrumental concerns of effectiveness and efficiency within a project focus, to longer-term objectives of capacity-building, empowerment, and more meaningful participation in the process of urban governance itself (Mathur, 2000; Mehta, 1999). Furthermore, greater recognition exists that legislated procedures for participation in city governance in India, such as the act of voting in periodic elections, alone do not constitute engagement or active citizenship. In addition, the huge scale of many urban centres (like Delhi), together with bureaucratic complexity and lack of formal channels to decision-making structures, renders the political process remote to ordinary citizens, which underscores the need for participation on a more ongoing basis (Mehta, 1999).

To date, however, actual participation of the poor population in urban governance in India is considered limited (Mehta, 1999; Dutta, 2002). Governmental mechanisms for participation are weakly developed and have achieved mixed results in different poverty alleviation schemes over the past several decades (Kundu, 2001; Dutta, 2002). The Indian experience does have several success stories that are civil society-driven, such as the Self-Employed Women's Association (SEWA) in Ahmedabad and the Society for the Promotion of Area Resource Centres (SPARC) in Mumbai, organizations that developed over time large constituencies, strategic approaches to urban poverty issues, and capacity to influence public policy (Appadurai, 2001; Dutta, 2002). For the most part, though, civil society activities related to urban governance in the country would fall under the narrower meaning of participation within a state-defined agenda of government-community programs, with NGOs sometimes acting as intermediaries or implementers (Mehta, 1999; Mathur, 2000). Such efforts to promote community participation have essentially been on an ad hoc basis and, while many government agencies do provide funding to NGOs for mobilizing communities at the grassroots, this support represents a small percentage of public funding (Mehta, 1999). Nonetheless, the various initiatives so far in the direction of more participatory urban governance are regarded as experiments or new forms of state-society relations, with potential for building on the more promising efforts (Mehta, 1999; Mathur, 2000; Dutta, 2002).

The partial achievements towards participatory urban governance in India thus far are attributed mainly to, in the case of the government-sponsored programs, problems of delivery, irrelevant approaches, and insufficient investment in capacity-building at the community level (Mathur, 2000; Dutta, 2002; Kundu, 2001). On the latter point, the amount of time and effort required to establish community-level structures or CBOs in low-income settlements has often been underestimated (Mathur, 2000). Where NGOs have been involved, community capacity-building has generally been a higher priority, but geographic scale has been restricted (Mehta, 1999; Dutta, 2002). Apart from these factors, basic understanding of participatory initiatives in urban India has been hampered by a lack of analytical literature and incomplete documentation of cases (Mehta, 1999). This suggests the need for critical appraisal of systems of participation in urban settings, in order to better identify the potentials and constraints of the changed roles of civil society and the state under the new paradigm of governance (Mehta, 1999).

In the new mode of urban governance in India whereby all stakeholders are ostensibly partners in development, it is nevertheless a matter of debate whether the poor will benefit, or

to what extent. The optimistic view is that the devolution of state authority and partnership approach will be more inclusive and more responsive to the needs and aspirations of the poor (Dutta, 2002). Reflective of this outlook, the discourse at times utilizes phrases like "pro-poor perspectives" and "pro-poor partnerships" (e.g., Jain, 2003a; 2003b). The more cautious view, on the other hand, is that authentic partnerships between the urban poor and the state will prove a major challenge to establish and sustain, as such relations are contingent on mutuality, joint commitment to long-term interaction, sharing of responsibilities, and a balance of power (Mehta, 1999). From this perspective, in order for pro-poor partnerships to progress, it is considered essential to strengthen the voice of the urban poor and the capacity of the CBOs and NGOs that represent them, to institutionalize suitable arrangements to further participation, and to incorporate partnerships into poverty alleviation strategies at the city scale (Mehta, 1999; Dutta, 2002).

Apart from intellectual trends and change in official thinking in India, a popular movement demanding greater transparency and accountability from government, which emerged during the 1990s, has shaped the new paradigm of urban governance (Robinson, 2003; Paul, 2002). The Public Affairs Centre (PAC), a citizens' action group in Bangalore in south India, has been at the forefront of this initiative and similar organizations have since been established in Delhi and other Indian cities (Balakrishnan and Gopakumar, 2001; Paul, 2002). The movement seeks to hold the state to account for poor standards of service delivery, corrupt practices, bureaucratic inefficiency, and general unresponsiveness in regards to the needs and problems of citizens (Robinson, 2003; Paul, 2002). PAC has pioneered the use of municipal report cards in India, featuring rankings of a wide range of public services based on citizen surveys, for the purpose of shaming or otherwise pressuring government agencies into improving the quality of services and addressing governance-related issues (Paul, 2002; Balakrishnan and Gopakumar, 2001). In addition, PAC and other civil society groups have undertaken independent analyses of local government budgets, carried out public education campaigns, interacted with reform-minded government officials and politicians, and generated awareness through the mass media (Paul, 2002; Balakrishnan and Gopakumar, 2001; Robinson, 2003). While these activities have influenced positive change in specific instances, such as in Bangalore, the urban accountability movement is at a nascent stage.

Another important dimension to the accountability movement has been a national campaign for the right to information (RTI) that began in rural Rajasthan, also during the

1990s,[25] and subsequently spread to many other parts of the country, including the urban areas (Das, 2001). Because the Indian state has historically operated with lack of transparency and withheld information from the public, the right of citizens to access information is very significant as a means for civil society to monitor and challenge government practices (Das, 2001; Centre for Civil Society, 2003; Mander, 2003). Information about what goes on inside government structures is seen as crucial, especially, to uncover and restrain corruption (Centre for Civil Society, 2003; Das, 2001; Mander, 2003). Over the past few years, Delhi and a number of other state-level governments in the country have passed RTI legislation and recently the central government followed suit.[26] In principle, under these laws any citizen can request information pertaining to the activities and spending of a government department, inspect any files, or make copies of documents, to which government officials must comply within stipulated time frames (Parivartan, 2007).

Although RTI legislation has been hailed as a democratic victory for Indian citizens, and has led to tangible results within a relatively short period of time, academics have expressed concerns that, in placing the onus on citizens as watchdogs of the state, the state is perversely let off the hook as far as systematically improving its performance (Jenkins and Goetz, 1999). Shortcomings have also been identified with the legislation itself and its implementation. The Delhi RTI Act, for instance, contains no provisions for independent review of disputes or disclosure of disciplinary action taken against government officials, and the fee structure for information requests and associated time commitment may be prohibitive to the urban poor (Centre for Civil Society, 2003). Furthermore, after the Delhi RTI Act became effective in 2001, instances have occurred where government officials were unaware of their responsibilities under the legislation, or simply refused to accept information requests (Kejriwal, 2002). As I discuss in the empirical section, the study community utilized the Delhi

[25] The right-to-information movement in India has its genesis in Rajsamand district in Rajasthan, where the Mazdoor Kisan Shakti Sangathan (MKSS) (Workers' and Farmers' Power Organization), a grassroots organization, has developed innovative tools such as *jan sunwais* (informal public hearings held in villages) to expose the misappropriation of development funds and other public resources by local politicians, government officials and private contractors. The resistance that MKSS encountered in obtaining official records led to a strategy to demand a legal basis to access government documents, which was subsequently adopted in other parts of the country. The MKSS experience, together with other independent initiatives in India, thereafter evolved into a mass movement for the right to information (Jenkins and Goetz, 1999).

[26] According to Parivartan, a Delhi-based NGO, nine state governments (including Delhi) in India have passed RTI laws (Parivartan, 2007). Similar legislation, pertaining to central government agencies, came into force in late 2005 (Racicot, 2006).

RTI Act to obtain information about service allocation in their area, with less than fitting results.

4.6 Social Capital Research

This last section reviews the empirical-based research on social capital and civil society in the Indian context; I focus on scholarly studies that, consistent with my conceptual approach, look at social capital as a relational phenomenon which generates group-level benefits or outcomes (as opposed to individual-level benefits). This body of work, by Indian and non-Indian researchers, consists of three books (i.e., Krishna, 2002; Varshney, 2002; Bhattacharyya et al., 2004) and another dozen or so essay-length papers, representing a combination of quantitative and qualitative approaches. As such, the amount of work emanating from India is limited compared to the voluminous western literature. Nonetheless, the Indian contribution is important and perceptive, consisting of several large-scale research efforts as well as case studies of social movements, natural resource management, and locality-based communities, mostly in rural settings. As far as I am aware, only one case study has been done of social capital in low-income urban settlements in the country (i.e., Majumdar, 1995).

Overall, the Indian research is predominantly from a Putnamesque perspective; however, a few of the village-based studies, in suggesting that social capital can operate as part of the hegemonic strategy of more powerful groups, owe an intellectual debt to Bourdieu (Bhattacharyya et al., 2004). The following discussion covers the macro- and meso-level studies (national- and regional-scale), as well as the one micro-level study of urban communities.

4.6.1 Macro-scale studies

Blomkvist (2002) discusses the Agora Project,[27] a large-scale research initiative that examined the effect of social capital on democratic performance in India and South Africa, which was undertaken collaboratively by political scientists from those two countries as well as Sweden. The Indian component of the project involved a random household survey carried out in 1998-

[27] The Agora Project, a research effort on "Democracy and Social Capital in Segmented Societies," involved researchers from the Centre for Political Studies, Jawaharlal Nehru University, New Delhi; the Department of Political Science, Utkal University, Bhubaneswar, Orissa, India; the Department of Political Studies, University of the Witwatersrand, Johannesburg, South Africa; and the departments of Government and Peace and Conflict Research at Uppsala University in Sweden. The research was funded by the Swedish agency SAREC (Blomkvist, 2003).

99 in five Indian states: Gujarat, Kerala, Orissa, Uttar Pradesh and West Bengal. Data were collected from a total of 3,200 respondents on the main building blocks of social capital, that is, associational affiliation, informal networks and trust levels, as well as perceptions of government responsiveness and effectiveness.[28] The Agora Project research results, in general, support Putnam's hypothesis about regional government in Italy – that micro-level social capital or social connectedness (integration, in Woolcock's model) is positively correlated with government performance. The Indian states with higher associational levels and more extensive informal networks, such as Kerala and Gujarat, tend to have relatively better-quality governments at the state level (Blomkvist, 2002).

In addition, although two of the five states had leftist governments, which might be expected to be more attuned to citizens' preferences and demands, the Agora Project determined that social capital accounted for variation in government performance to a much greater extent than political regime (Blomkvist, 2002). However, contrary to social capital theory, the study found that generalized trust (trust in other Indians) was inversely related to government effectiveness; possible reasons for this finding were not hypothesized (Blomkvist, 2002).

Mayer (2004) carried out a second macro-level study of India in which he essentially attempted to replicate Putnam's methodology from his Italian study (1993), for the same purpose of determining the relationship between civic community and quality of government performance, again at the state level. The Mayer study is from a collection of papers in a book entitled *Interrogating Social Capital: The Indian Experience*, edited by Bhattacharyya et al. and published in 2004. Like Putnam, Mayer constructed a Civic Community Index and an Institutional Performance Index for 15 of the largest Indian states, using some, but not all, of the variables employed by Putnam, the reason being that certain data sets equivalent to Putnam's were not available in India.[29] Mayer's data were obtained from existing Indian sources and the institutional performance data compared to the United Nations Development Program's (UNDP) Human Development Index (HDI) and Gender-related Development

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[28] In addition to respondents' subjective evaluations of government performance, the Agora Project also utilized objective measures of government performance based on statistical information in a number of policy areas (Blomkvist, 2002).

[29] For example, as mentioned earlier, India does not have reliable records pertaining to civil society organizations, so Mayer used membership in cooperative credit societies, which was available from records of government programs, as a proxy for associational levels.

Index. Consistent with Blomkvist and Putnam, Mayer (2004) ascertained a strong positive relationship between civic community and government performance across the Indian states, and a negative relationship between civic community and government corruption.

Mayer's other major research finding appears to contradict Putnam's thesis about the long-term historical roots, or path-dependence, of current endowments of social capital. In the Indian scenario, Mayer contends, fairly recent educational investments at the state level (pre-1970s), in shaping literacy rates and, presumably, the capacity of individuals to participate in the public sphere, provide a better explanation of present-day civic community than does Putnam's argument about the formative character of associational life over the preceding centuries. Mayer's research suggests, in other words, that human capital rather than social capital fosters civic community in India.

A third paper that focuses on social capital at the macro-scale in India is that of Serra (2004) which, like Mayer's study, is based on existing statistical data, including the 1996 National Election Study Post-Poll Survey and UNDP's HDI Index. Serra, via a different analytical route, reaches a similar conclusion to Mayer in positing the importance of education and literacy in the creation of civic community in the country. Serra's conceptual model of the social capital-institutional performance relationship differs from Mayer, though, in that she views literacy as a key intervening variable as opposed to a pre-condition. For Serra, the dynamic between literacy levels, social capital and institutional performance is intricate, for the reason that literacy not only influences civic community but is itself a product of previous policies or the institutional environment.

Serra's paper, moreover, provides an in-depth assessment about the feasibility and validity of doing macro-scale social capital research in India. Whereas Blomkvist and Mayer are basically positive about the appropriateness of applying Putnam's formulation to India, Serra is more circumspect. Aside from limitations to do with data accessibility, which Mayer encountered, Serra identifies numerous other methodological issues, including that of data reliability and inter-state comparability of data from secondary sources, and measurement and/or interpretation of variables in survey approaches, especially with respect to generalized trust and structures of cooperation. Likewise, Serra views the aggregation of data to the state level as potentially problematic, in that many Indian states have very large populations which are internally differentiated and complex, and indicators of institutional performance may not reflect significant variation in regional development within states. Despite these difficulties,

Serra does not declare that the idea of social capital is irrelevant to India; rather, she argues that Putnam's methodology requires adaptation in the Indian scenario and, to that end, is encouraging of research at scales both larger and smaller than the state, drawing from a different and possibly richer set of data sources than Putnam used in Italy.

4.6.2 Meso-Scale Studies

Shifting now to empirical research at a meso-geographic scale, two studies portray the exceptionality of social capital in the southern state of Kerala relative to India as a whole. The first paper, by Heller (1996), examines the industrial sector in Kerala, which he characterizes as having evolved over the past several decades from an era of labour militancy, low productivity and exploitation of workers, to a period of relative labour peace, higher productivity, and greater protection of workers' rights. Such changes, occurring both in the formal and informal segments of the economy, are attributed to the mobilization and aggregation of interests of the formerly unorganized working classes in tandem with the responsiveness and support of state actors. Heller asserts, furthermore, that the case of the industrial sector, in fact, mirrors the general pattern of interaction between citizens and the state in Kerala; the embeddedness of the state in society and the mutually reinforcing nature of such relations exemplifies Evans' (1996) state-society synergy model of social capital. This trajectory has enabled Kerala to carry out programmatic, broad-based social development (e.g., near-universal literacy, decent standards of health care, social welfare programs), despite having a per capita income less than the Indian average (Heller, 1996). Interestingly, these accomplishments are not a consequence of population homogeneity, which might be expected to facilitate collective action; quite the opposite, Kerala is one of the most socially diverse states in India.[30]

Heller goes on to observe that Kerala, in many ways, resembles the civic regions of northern Italy as portrayed by Putnam (1993), and argues that this is not by happenstance. Acknowledging that a history of community associations and civic engagement in 19th century Kerala may have predisposed the state towards citizen demands, Heller considers post-independence events, especially the inclusionary strategies of socialist political parties as well as state policy that deliberately sought to diminish traditional sources of power (e.g., feudal

[30] The composition of Keralite society is approximately 60 % Hindu, 20 % Muslim, and 20 % Christian (Heller, 1996).

landlordism and other patron-client relations), as central to current state-society synergy. The state, in effect, actively promoted egalitarian social relations which, as Evans (1996) maintains, is more conducive to state-society synergy. In closing about Heller's paper, the Kerala experience emphasizes not only the importance of civil society and the state in building social capital, but also the possibilities of achieving synergy between the two spheres on a time scale of years or decades, contrary to Putnam's more pessimistic prediction that social capital accumulates only very gradually.

Whereas Heller is primarily concerned with the nature of the relationship between society and state, the second paper on Kerala, by Swain (2004), examines the horizontal dimensions of social capital across society, or integration, in Woolcock's framework. Swain describes the dense and rich associational life in Kerala, which attests to a high level of integration. As examples of everyday civil society, Swain cites the ubiquitous tea shops, the public libraries which are found in nearly every village, and the youth, sports and cultural clubs, all of which are hubs of social interaction. Kerala, moreover, is a place of joiners, like Tocqueville's America; people there form organizations for a wide range of purposes, spanning the non-political ("civil society for itself") and political. In addition, Kerala is noteworthy, especially, for its mass movements over the past few decades, which include campaigns for universal literacy and science popularization; protests against large-scale dams, forest exploitation, industrial pollution, and the mechanized fishing sector; and mobilization of farmers in opposition to importation of food products marketed by multi-nationals (Swain, 2004).

Swain explains the proliferation of social movements in terms of bonding and bridging social capital; such movements do not reflect an absence of social divisions in Keralite society but, rather, the presence of bonding relations within groups of a kind that is conducive to development of bridging ties with other groups. Because bonding relations have facilitated support at the micro level and bridging ties have broadened that support at the meso-level, Swain characterizes any social movement in Kerala as "a network of networks" (2004; 315). Swain's study primarily utilizes a qualitative approach, though he does provide some quantitative evidence from the Agora Project which indicates that Kerala does, indeed, have higher levels of participation in organizations and popular movements than the four other states for which data were collected.

The degree of social cohesion observed by Swain in Kerala stands in contrast to the more fragmented society of Orissa, the subject of an earlier journal article by the same author. Swain

(2000) found that, in Orissa, social movements related to environmental protests against the state were more frequent and broad-based in the coastal region of the state whereas, in inland areas, protests were less common and, of those that did occur, less successful in achieving a positive result. In the inland areas, nascent movements failed to expand or could not be sustained, which Swain believes had to do with the exclusionary character of bonding relations in that part of the state, such that disparate groups could not come together around a shared cause.

Another source at an intermediate geographic scale is Ashutosh Varshney's book called *Ethnic Conflict and Civic Life: Hindus and Muslims in India*, published in 2002. Varshney investigates the connection between civil society and the occurrence of Hindu-Muslim violence, commonly referred to as communal violence, in urban India. Though India's population remains predominantly rural, outbreaks of violence between the two communities over the past several decades have taken place mostly in urban areas.[31] Varshney makes a detailed analysis of six cities across several states, three of which have a history of communal violence (Aligarh, Hyderabad, Ahmedabad) and three where there has been relative peace (Calicut, Lucknow, Surat). His methodology is both quantitative and qualitative, based on newspaper records, archival documents, elite interviews and random household surveys. Varshney's main research finding is that the cities having more extensive civic ties between Hindu and Muslim communities were better equipped to maintain social peace during periods of crisis than those whose civil society was divided along religious lines. Varshney's inter-communal civic ties embody the idea of bridging social capital, demonstrating the efficacy of this form of social relations for positive macro-outcomes, as is posited in the general theory.

Furthermore, in distinguishing between quotidian and associational forms of civil society, Varshney argues that, while both forms contribute to preserving inter-communal harmony, the latter is particularly significant. His reasoning is that, in times of tension, informal interaction between Hindus and Muslims has promoted communication, stemmed inflammatory rumours, and helped to form temporary organizations, such as peace committees, which have lessened conflict; however, the communally integrated, formal organizations, such as trade unions, business associations, professional bodies and NGOs, which stand to lose from conflict, represent an "institutionalized peace system" (Varshney, 2001). The formal associations also

[31] Based on newspaper archives of the *Times of India* between 1950 and 1995, Varshney (2001) determined that, over this period, 96.4 percent of total deaths from communal violence in the country had occurred in urban centres, with the remainder, or 3.6 percent of deaths, occurring in rural areas.

constitute a countervailing force to local politicians who, for their own political gain, might otherwise attempt to polarize the two religious groups.

The final meso-level study is Anirudh Krishna's book entitled *Active Social Capital: Tracing the roots of development and democracy*, also published in 2002, which is an empirical study of 69 villages in the states of Rajasthan and Madhya Pradesh. Krishna's field research, carried out between 1998 and 2000, consisted of a random survey of villagers utilizing a structured questionnaire, open-ended conversations with selected villagers, and interviews with village leaders and external actors, for a total of approximately 2,500 respondents. The purpose of Krishna's study was to find out the influence of social capital with respect to three outcomes or dependent variables: economic development, community peace and democratic participation. Statistical analysis of the data set established a significant, positive correlation between levels of social capital and all three outcomes at the village level; however, social capital alone did not explain the variation observed in the dependent variables. Krishna found that what did account for the variation was the presence of a mediating agency, usually younger, more educated village leaders[32] and entrepreneurs, often from SC and OBC caste categories, who were able to provide important inputs to "activate" the latent social capital within the village. These inputs included access to information about government programs, contact with local politicians, knowledge of the workings of the bureaucracy, and direction in terms of objective-setting and tactical advice for development of their villages.

The agents, in effect, establish bridging and linking social capital that increases the range of possibilities for their respective villages. Krishna's argument is that, at the village level, agents are pivotal to making collective action, such as it is, more effective and productive through availing themselves of potential opportunities in the external environment. In this regard, Krishna conceptualizes social capital as a stock which generates a flow of benefits; agents have the capacity to increase the flow of benefits for a given stock. Krishna's research, like the macro-level studies of Mayer and Serra, suggests that human capital, in the form of agency, is essential to building social capital in India. While Krishna concedes that uncertainty exists around whether a community's stock of social capital can be increased appreciably in the short term, he argues that it can be enhanced indirectly by increasing agency

[32] In Krishna's study, agents fulfilled a leadership role in their villages, although were often not the same person as the traditional leader or head of the *panchayat* (village committee), the local governance institution.

capacity, which *can* be achieved fairly rapidly (e.g., leadership training, dissemination of information about government programs, awareness of constitutional rights) (Krishna, 2004).

4.6.3 Community-Level Urban Research

While social capital research has been undertaken in a number of villages around the country, urban communities have been less studied. The single urban study is Majumdar's (1995) paper on squatter settlements in Delhi, Hyderabad (the capital city of the southern Indian state of Andhra Pradesh) and Manila, which was part of a project entitled "Squatters and the State: A Comparative Study of India and the Philippines," sponsored by the Indo-Dutch Program on Alternatives in Development of the Indian Council of Social Science Research, New Delhi. Majumdar's fieldwork was carried out in a total of six settlements (two from each city) during 1992-93, and comprised household surveys using a structured questionnaire (362 respondents in all), as well as interviews with local leaders and external actors. In terms of its urban context, micro-scale and data collection methods, Majumdar's study is closely related to my research in Sultanpuri. Majumdar, however, does not use the terminology of social capital, nor address the aspect of trust; instead, the primary focus is on networks and social norms, two of the basic elements of social capital, as well as on collective action, considered the outcome of social capital. In addition, though Majumdar does not utilize the current language of community-level social capital, the concepts of bonding, bridging and linking relations are implicit in the network analysis. Therefore, on balance, I consider this source to fall within the ambit of empirical social capital research.

In terms of the basic structure of social organization, Majumdar found a number of similarities as well as differences across the settlements surveyed, the major variation occurring between the Indian cities and Manila. In all three cities, Majumdar observed that small-size informal networks, rooted in norms of reciprocity, were the primary form of social structure in the squatter communities. Another common feature was interaction between individual networks which, in turn, created larger, loosely-knit networks of solidarity at the local level. Across the three cities, both the small-size networks and "macro" networks were, for the most part, based on primary affinities (e.g., caste, kinship, religion, village/region, linguistic affiliation)[33] and, hence, connoted bonding relations and thick trust. The main

[33] Nonetheless, the relative importance of the different components of ascriptive affiliation in network structure varied from city to city. In the case of the two squatter settlements in Delhi, for instance, small-scale networks

purpose of the small-size networks in all three cities was various types of mutual aid and support for members within individual networks, whereas the macro-networks fulfilled wider collective functions. One area of difference, however, was the specific orientation of macro-networks across the cities; in Delhi and Hyderabad, macro-networks were engaged to a greater extent in activities related to the welfare of ascriptive groups within the settlement, while in Manila these structures were more involved with neighbourhood- and settlement-wide issues.

Majumdar also investigated the types of community-based organizations (CBOs) present in the squatter settlements, finding that, like the informal macro-networks, the Indian cities had a significantly higher proportion of associations centred around the interests of ascriptive groups and a lesser percentage devoted to the general interests of residents, relative to Manila. At the same time, associational membership in the Delhi settlements did contain some cross-cutting ties, or bridging social capital. Overall, Majumdar contends that associational life is less intense in the two Indian cities as compared to Manila, where there has been a strong tradition of grassroots organizing in low-income settlements, a strategy of coalition-building, and steps made towards institutionalization of the urban poor in formal structures of governance. Nonetheless, Majumdar considers that awareness is growing amongst the urban poor in Delhi of the efficacy of organizing themselves to gain access to public services.

As far as relations between the squatter settlements and outsiders, the general pattern in Delhi, according to Majumdar's study, was that of subordination. To the squatters, bureaucratic procedures and decision-making were, in effect, opaque, and demand-making was chiefly through clientelistic relations with politicians and political parties; it seems that no NGOs operated in the settlements at that time. Given these circumstances, residents of the Delhi squatter settlements were able, through their own associations and vertical connections or linking social capital, to compel the authorities in several instances to accede to their demands, such as in resisting eviction. Nonetheless, Majumdar is of the view that patron-client systems, on the whole, constrain the development of more broad-based social organization and collective action that would ultimately be more productive for social change, to which the Manila experience attests. To conclude, Majumdar's research findings for the two Indian cities substantiates a number of broad characterizations of Indian society in the literature, namely, the predominately ascriptive basis of civil society, the low levels of associational life in most

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were mostly based on caste and village/regional ties and macro-networks predominantly structured according to caste, religion and region (Majumdar, 1995).

parts of the country, and the widespread pattern of patron-client relations between disadvantaged groups and more powerful actors.[34]

[34] Further discussion of several village-level studies and a paper on railway porters in Mumbai is included in Appendix B.

Chapter Five: Delhi: A Mega-City

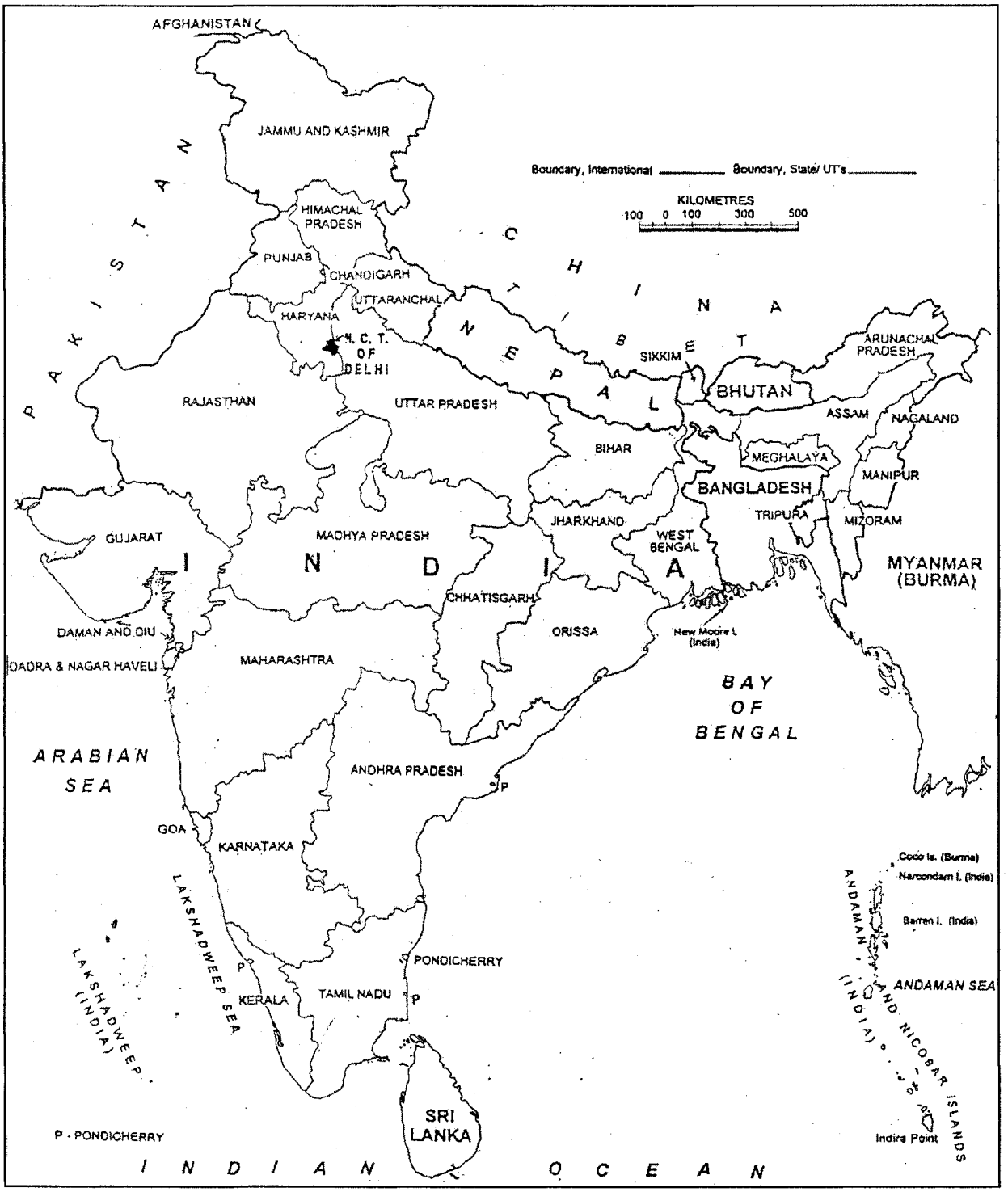
The purpose of this chapter is to provide background material about Delhi to situate the study community. The chapter is organized in seven parts. The first section covers Delhi`s unique administrative framework, followed by the city`s geography and historical significance in the second section. The third section turns to demographics and urban development in the city, wherein it is explained how Delhi, as one of the fastest growing and most prosperous urban centres in India, is in a paradoxical position of having a relatively low poverty rate and the majority of the population living in substandard settlements. The fourth section describes the main settlement categories in the city. The fifth section is devoted to public provision of environment-related services in Delhi, including water supply, sanitation and solid waste management. The sixth section takes a brief look at issues of water and air pollution. The seventh and final section is an historical and policy-related perspective of Delhi's squatter colonies and resettlement areas, the two settlement categories that are represented in the study community.

5.1 Introduction and Administrative Framework

Delhi is the capital of India and its third-largest city (after Mumbai and Kolkata), recording a population of 13.8 million in the 2001 Census (Census of India, 2001) (shown on Map 1 below). Aside from its governmental role, Delhi is a major centre of commerce, trade, industry, education and health care in the country (Sivam, 2003; NCTD Planning Dept., 2004; Ghosh, 2000). Following the passage of the *Government of the National Capital Territory of Delhi Act* in 1991, Delhi has been officially known as the National Capital Territory of Delhi (NCTD) (Kumar, 1999). The NCTD extends over an area of 1,483 sq. kms., with a maximum length of 51.9 kms. and a maximum width of 48.5 kms (NCTD Planning Dept., 2004). Similar to the District of Columbia in the United States, the NCTD belongs to the union and not to any of its member States (Kumar, 1999). Administratively, the NCTD has a special status within the Republic of India, which places it under greater Central Government control than is generally exercised with the States (Singh, 2003). The Government of the NCTD is also known as the Delhi Government.

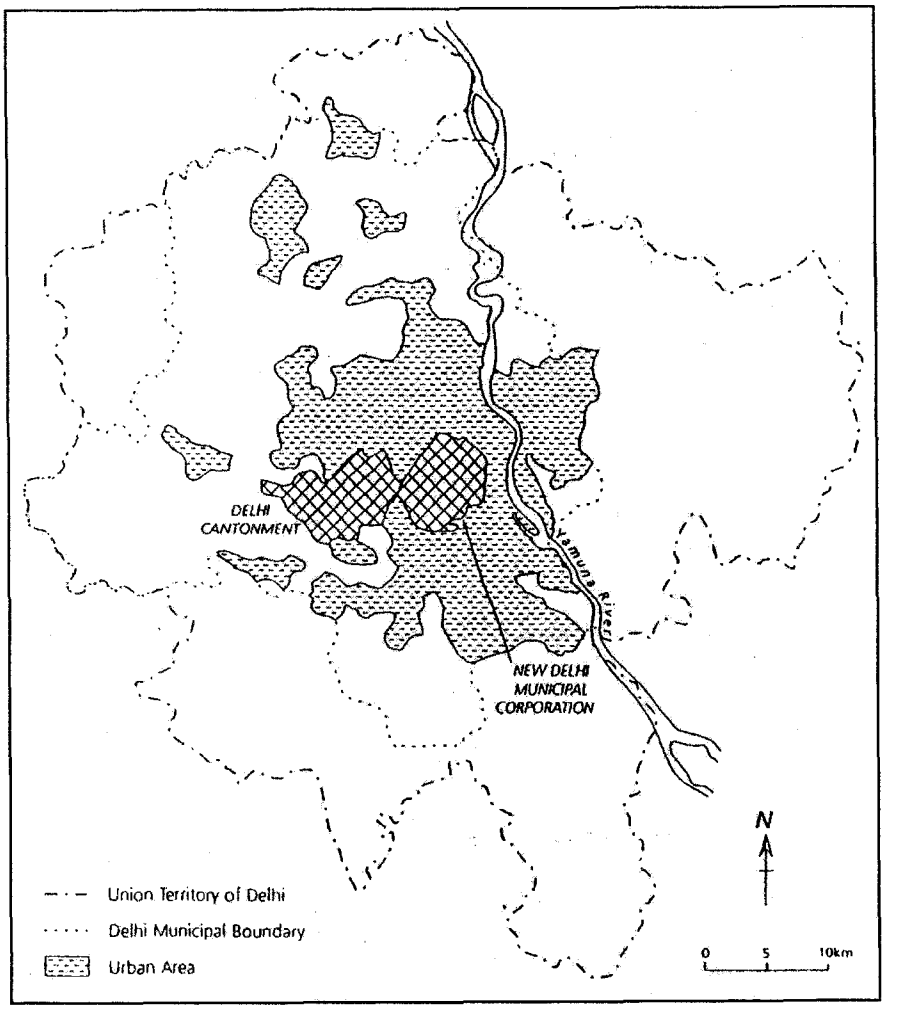
The NCTD falls under three local governments: the Municipal Corporation of Delhi (MCD), the New Delhi Municipal Council (NDMC), and the Delhi Cantonment Board (DCB) (Map 2). Of the three, the MCD is far and away the largest jurisdiction, representing 94.2 % of

Map 1. India



Source: Census of India, 2001

Map 2. National Capital Territory of Delhi (NCTD)



Source: Kumar, 1999

the total land area (1,397 sq. kms.) and approximately 96 % of the population (Census of India, 2001; Ghosh, 2000). Accordingly, the MCD is among the world's biggest municipal bodies, second only to Tokyo in terms of area (MCD, 2005). The much-smaller NDMC and DCB, combined, account for the remaining 5.8 % of the land base (86 sq. kms.) and 4 % of the population (Census of India, 2001; Ghosh, 2000). The MCD consists of urban and rural land uses, whereas the NDMC and DCB areas are entirely urban (NCTD Planning Dept., 2004).

The NCTD, in turn, is part of the National Capital Region (NCR), which extends over a much larger area (30,242 sq. km.) and covers portions of the neighbouring states of Haryana, Uttar Pradesh and Rajasthan (NCRPB, 1999). The concept of the NCR originated with the first Master Plan of Delhi in 1962 as a strategy to decrease population pressure on Delhi (NCRPB, 1999). The NCR is becoming increasingly built-up and integrated with Delhi, forming an urban belt around the NCTD made up of satellite towns such as Gurgaon, Faridabad, and Bahadurgarh in Haryana, and Ghaziabad, Noida and Meerut in Uttar Pradesh. Some of the urban centres are, in fact, growing at a faster rate than Delhi, owing to lower property values and relocation of middle-class households spurred by increasing congestion and air pollution in the NCTD (Véron, 2006).

5.2 Geography and Historical Significance

Delhi is located in the northern part of the country between the latitudes of 28°-24'-17" and 28°-53'-00" North and the longitudes of 76°-50'-24" and 77°-20'-37" East (NCTD Planning Dept., 2004). Due to its inland position, with the great desert of Rajasthan to the west and southwest and the Gangetic Plain of Uttar Pradesh to the east, Delhi receives dry continental air masses for most of the year, which produce a semi-arid climate (NIUA, 2000). In the summer months from April to June, temperatures are extremely high (maximums of 40-45 degrees Celsius); winter months of December and January are fairly cold (minimum temperatures of 4 to 5 degrees Celsius) (NCTD Planning Dept., 2004). Average annual rainfall in Delhi is 715 mm, three-quarters of which occurs during July to September when moisture-laden oceanic air masses bring the monsoon (Kumar and Singh, 2003).

The two most significant physiographic features of the city are the Delhi Ridge and the Yamuna River. The Delhi Ridge is the terminal part of the Aravallis Hills that originate in Rajasthan, forming a spine through the city that acts as the main drainage divide (NCTD Planning Dept., 2004). The Ridge, which has become fragmented due to various urban

encroachments, features the largest remaining expanse of natural forest within the city, which has a mere 6 % of its land base devoted to green space (Centre for Science and Environment [CSE], 2000a; NCTD Planning Dept., 2004). The Yamuna River, a major tributary of the Ganges River, flows along a 22 km-stretch through Delhi (CSE, 2000a). As in many Indian cities, the river has contributed an all-important water supply and means of transportation that has facilitated urban settlement (WWF-India, 1995). The Yamuna, moreover, is a sacred river for most Delhiites (CSE, 2000a; NCTD Planning Dept., 2004).

Delhi is an ancient city that has been continuously occupied for over 3,000 years (Dutt and Pomeroy, 2003; Breese, 1974). The earliest urban settlement in the Delhi area is believed to be Indraprastha, founded in the tenth century B.C. on the west bank of the Yamuna River (Singh, 1989). After 3,000 years of Hindu, then Islamic rule, the British arrived in Delhi in 1803 and established a military post there. The British shifted the capital from Calcutta to Delhi in 1911, after which it became the jewel of the British Raj until 1947, the year that India became an independent republic (Metcalf and Metcalf, 2002). In all, the various powers that occupied Delhi over the millennia built some 17 cities at different sites with the metropolis's boundaries (Dutt and Pomeroy, 2003). That legacy is most apparent in present-day Delhi in terms of its urban planning and architecture, especially from the Mughal and British eras (Ghosh, 2000).

Following Indian Independence and Partition, a massive number of refugees came to Delhi within a short space of time (Metcalf and Metcalf, 2003). This influx, along with Delhi's sustained population growth over the latter half of the twentieth century, has resulted in urban expansion in all directions over the NCTD area. From its core area between the Delhi Ridge and west bank of the Yamuna River, a triangle of land that contained all of the different settlements from Delhi's past, the metropolis has in recent decades spread westward well beyond the Ridge and eastward across the Yamuna to the far bank (known as the Trans-Yamuna area) (Breese, 1974; NCRPB, 1999). The Delhi urban area, which made up 46.2 % (685.3 sq. kms.) of the NCTD land base in 1991, now covers 62.4 % (924.7 sq. kms.) of the NCTD (NCTD Planning Dept., 2004). With urban sprawl, many peripheral rural villages have been appropriated into the Delhi urban area and reclassified as "urban villages," after which they are transformed over time into urban settlements (Agarwal, 2003).

5.3 Population

The population of Delhi has increased many times over during the twentieth century, from a total population of 0.4 million in 1901 to over 13.8 million in 2001 (Table 5.1 below) (NCTD Planning Dept., 2004). Much of this growth has occurred since Independence. The ratio of urban to rural inhabitants in the NCTD has changed significantly over time as well, from being roughly equal in 1901 to over 93 % urban dwellers in 2001. Delhi is one of the most rapidly growing urban areas in India, registering decadal growth of 52.3 % from 1991 to 2001 (NCTD Planning Dept., 2004). The annual increase in Delhi's population is currently about 500,000 persons per year, more than half of that due to in-migration and the rest from natural increase (NCTD Planning Dept., 2004). In addition to the core population of 13.8 million, Delhi has a floating population of two million who commute into the city every day (TERI, 2001). Growth is expected to continue into the foreseeable future, with the population of Delhi projected to reach 20 million by 2012 and 22.4 million by 2021 (NCRPB, 1999).

Table 5.1. Population Growth of NCTD, 1901-2001

Census year	Total pop'n (millions)	Urban pop'n (millions)	% Urban pop'n	% Decadal growth in urban pop'n
1901	405,819	214,115	52.8	--
1911	413,851	237,944	57.5	11.1
1921	488,452	304,420	62.3	27.9
1931	636,246	447,442	70.3	47.0
1941	917,939	695,686	75.8	55.5
1951	1,744,072	1,437,134	82.4	106.6
1961	2,658,612	2,359,408	88.8	64.2
1971	4,065,698	3,647,023	89.7	54.6
1981	6,220,406	5,768,200	92.7	58.2
1991	9,420,644	8,471,625	89.9	46.9
2001	13,850,507	12,905,780	93.2	52.3

Source: Adapted from NCTD Planning Dept., 2004

Compared to most Indian cities, Delhi's population is heterogeneous in terms of regional origins, languages, ethnicities and cultures (NCTD Planning Dept., 2004). For some time now, citizens from all over the country have been drawn to the metropolis. During the period 1981-1991, the most recent decade for which migration data are available, the majority of migrants coming to Delhi were from the neighbouring northern states, particularly Uttar Pradesh (49.6 %) and, to a lesser extent, Haryana (11.8%), Bihar (11.0 %), Rajasthan (6.2 %) and Punjab

(5.4 %). The more distant states in the south and northeast contributed smaller percentages of migrants (NCTD Planning Dept., 2004). Hindi is the most common language spoken in Delhi, though many regional languages and English are used also. Delhi is diverse, too, in terms of religious affiliation, with the following population breakdown: Hindus (82.0 %), Muslims (11.7 %), Sikhs (4.0 %); Jains (1.1 %); Christians (0.9 %); and Others (0.05 %) (Census of India, 2001).

A number of socio-economic indicators for Delhi are shown along with corresponding national figures[1] in Table 5.2, which reveals some similarities and differences. Average household size and percentage of Scheduled Castes, for instance, are about the same. The sex ratio, on the other hand, is much lower for Delhi relative to the entire country, primarily because of the historical dominance of single males in rural-to-urban migration and traditional restrictions on female mobility and participation in the labour market (de Haan, 1997; Neetha, 2004). Literacy is considerably higher in the megalopolis, though the gap between males and females

Table 5.2. Socio-Economic Population Indicators, Delhi and India

Indicator	Units	Delhi	India
Population density	persons/sq. km	9,340	324
Sex ratio	# females/1000 males	821	933
Average household size	persons	5.1	5.3
Scheduled Castes (SC)	% of total population	16.9	16.2
Literacy			
Persons	%	81.7	65.4
Males	%	87.3	76.0
Females	%	74.7	54.3
Birth rate	per 1000 persons	21.2	25.4
Death rate	per 1000 persons	5.9	8.4
Infant mortality rate	per 1000 live births	24.5	66.0
Worker participation rate			
Persons	%	32.8	39.1
Males	%	52.1	51.7
Females	%	9.4	25.6
Per capita income (annual)	Indian rupees	47,447	18,912
Unemployment rate	%	12.6	8.9
Poverty rate	%	9.4	26.1

Sources: NCTD Planning Dept., 2004; Census of India, 2001; National Sample Survey Organization, 55th Round, 1999-2000; Planning Commission, 2002

[1] A more apt comparison might be between Delhi and other major Indian cities or all of urban India; however, much of the data for urban India from the 2001 Census has not yet been made available.

parallels the country-wide trend. Birth, death and infant mortality rates are lower in Delhi than generally prevailing, as would be expected.

All of the economic indicators in Table 5.2, moreover, show divergence between Delhi and the national level. Per capita income in Delhi is more than double the national average, which is mainly due to the higher level of secondary and high-value tertiary activities in the economies of India's large cities (Planning Commission, 2002). In addition, Delhi's worker participation rate is lower than the Indian median and much lower for females in particular. In India, the urban participation rate is typically less than the rural rate because the Census definition of "worker participation" includes agricultural activity, whether paid or unpaid, but excludes household chores such as cooking and caring for children (Census of India, 2001). The very low percentage for Delhi females reflects a systemic under-enumeration of females employed in small-scale, informal sector firms, as well as those engaged in home-based piece-work (Venkateswarlu, 1998; Sharma, 2002). Delhi's high unemployment rate is counterintuitive, given the mega-city's rapid population growth and increasing economic prosperity over the past few decades; however, formal sector growth has been slow and the entire labour force has become increasingly casualized (Pathak, 1999; Venkateswarlu, 1998).

Finally, the statistics indicate a major differential between Delhi's poverty rate of 9.4 % and the national figure of 26.1 % (based on 1999-2000 data). Delhi's relatively low percentage reflects a substantial decrease from 1973-74 when the city's poverty rate was 49.6 % (Planning Commission, 2002). Nonetheless, the current figure of 9.4 % should be viewed with caution since poverty line-derived estimates tend to underestimate the urban poor.[2]

5.4 Typology of Settlements

An acute shortage of adequate housing and serviced land exists in Delhi, especially for the lower-income strata of the population (Sivam, 2003; Kundu, 2004; Sajha Manch, 2001). This situation is attributable to many factors, including the city's rapid population growth, lack of government investment, large-scale land speculation, lack of institutional credit for the urban poor, and the incapacity of the legal housing market to provide for all economic groups (Sivam, 2003; WWF-India, 1995). Even though the official poverty rate for the NCTD is under 10 %, the majority of Delhiites cannot afford the higher-quality housing stock supplied through the formal system (Sajha Manch, 2001; Sivam, 2003). As a result, informally provided

[2] See Appendix B for discussion of limitations associated with official poverty rates in urban India.

housing has played a vital role in filling the shelter gap in Delhi – for the urban poor in particular, but also the middle- and higher-income groups (Sivam, 2003). The lower ownership and rental costs of informal housing have allowed new immigrants to gain a foothold in the megalopolis and the settled population to minimize their housing expenditures, a significant outlay of the urban poor (Satterthwaite, 1997; Sivam, 2003). At the same time, informally provided housing is not without detrimental aspects, typically, poor shelter quality, insecure tenure status, and lack of community facilities and municipal services (Sivam, 2003; Kundu, 2004; Ali, 1995).

Table 5.3 below lists the main categories of settlements that are found within the NCTD, which variously reflect the formal planning system and housing market, the informal housing sector, the city's medieval heritage, and enduring rural traditions within the jurisdiction. The study community contains two of the eight settlement types: a resettlement colony and squatter area. Resettlement colonies are settlements established by the government agencies for people relocated from squatter settlements and designated slums, primarily in the inner city area, beginning in the early 1960s (GoI and GNCTD, 2001a; Ali, 1995). The majority of resettlement colonies are located in the urban periphery, especially west Delhi and the Trans-Yamuna area (eastern Delhi) (WWF-India, 1995). Resettlement areas are planned neighbourhoods (albeit to lower standards), laid out into small plots and having a modicum of facilities and services (GoI and GNCTD, 2001a; Ali, 1995; Kundu, 2004).

Informal squatter settlements, known as *jhuggi-jhonpris* or JJ clusters in Delhi, are scattered throughout the city – along roads and railway lines, around construction sites, in low-lying areas, on slopes of drainage channels and the banks of the Yamuna River, and in parking lots and city parks (GoI and GNCTD, 2001a; WWF-India, 1995; Yamuna Action Plan, 2005; Ali, 2003). Access to basic services is nonexistent or minimal in this type of settlement (GoI and GNCTD, 2001a; Kundu, 2004). Additional information about the number of communities, tenure status, housing type, and population for the different settlement categories is provided in Table 5.3.

Though Delhi's urban poor reside in all of the settlement types (excepting the rural category), they are mainly concentrated in the squatter settlements, designated slum areas, resettlement colonies and urban villages. The urban poor also inhabit the unauthorized colonies, regularized settlements and planned neighbourhoods, along with middle and upper-income groups (Kundu, 2004). In addition, a more destitute segment of the city's population

Table 5.3. Settlement Categories in Delhi

Category	Number of Communities	Tenure Status	Housing Type	Permanency of Housing	Infrastructure and Services	Pop'n in 2000 (millions)	% of Delhi Population
Planned colonies	Data unavailable	Legal; leasehold and freehold rights	Various; gov't flats, employer housing, group housing, estates	Permanent	Fair to good public services; plus private investment	3.31	23.71
Designated slum areas	Hundreds of buildings/properties, mostly in old walled city	Mostly legal; listed under the *Slum Areas Act*	Mainly tenements, e.g., *katras*	Permanent; although in detiorated state	Poor	2.66	19.05
Squatter settlements	1,100	Illegal	Huts *(jhuggies)*	Mostly temporary; some semi-permanent	Minimal or none	2.10	14.82
Resettlement colonies	44	Legal; leasehold and licensed properties	Small plotted houses; some tenements	Permanent	Poor to fair	1.78	12.75
Unauthorized colonies	1,432	Quasi-legal	Various; huts, tenements, middle-class housing, estates	Huts mostly temporary; other housing permanent	Minimal, though private investment of upper-income groups	0.74	5.30
Regularized unauthorized colonies	607	Quasi-legal	Various; huts, tenements, middle-class housing, estates	Huts mostly temporary; other housing permanent	Poor to fair; private investment of upper-income groups	1.78	12.75
Urban villages	135	Not in violation of Master Plan, exept units built outside limits	Rural housing	Permanent	Minimal	0.89	6.37
Rural villages	165	Not in violation of Master Plan, exept units built outside limits	Rural housing	Permanent	Minimal	0.74	5.30

Sources: Government of Delhi, 2002; Census of India, 2001; Kundu, 2004; Times of India, 2005; NCTD Planning Department, 2004

lives on the pavements in rudimentary shelters or is homeless (Zaidi, 2005). Although the settlement typology has but one slum category (designated slums), the case can be made that living conditions in many communities from other classes are slum-like (aside from the planned colonies) on account of poor-quality housing, unsuitability of sites for habitation, overcrowding, and inadequate facilities and services. Estimates of the percentage of citizens living in substandard settlements in Delhi range from around 50 % (Sivam, 2003) up to 75 % (Sajha Manch, 1999; WWF-India, 1995), which is remarkable considering the low official poverty rate in the city.

5.5 Public Provision of Infrastructure and Services

The administrative framework for provision of civic amenities in the National Capital Territory of Delhi is complex and involves a maze of authorities falling under multiple tiers of governance (Kumar, 1999). The various bodies responsible for environment-related infrastructure and services in the MCD, the jurisdiction covering the vast majority of the population in Delhi (including the study community), are listed in Table 5.4 below. As the table shows, services in the MCD are provided not only by different MCD departments, but also by several autonomous bodies under State and Central Government control. The main organizations of relevance to my thesis are the Delhi Jal Board (DJB) (water supply and sewerage), Delhi Development Authority (DDA) (housing, land and urban planning), Conservancy and Sanitation Department (solid waste management and sanitation), Engineering Department (drainage and other public works), Horticulture Department (parks and green spaces), and the Slum and JJ Department (slum and squatter settlement improvement). The DJB is under the jurisdiction of the Government of the NCTD (the Delhi Government) and the DDA is controlled by the Central Government. The other departments are all part of the MCD government structure.

Along with the shortage of affordable housing in Delhi, urban services for water supply, sanitation and solid waste management have not kept pace with urban growth (Ghosh, 2000; Nagdeve, 2004). All of the environmental sectors have insufficient levels of pubic infrastructure, operation and maintenance problems, and institutional inefficiencies and fiscal constraints, resulting in low-quality of services for the majority of Delhiites (Singh, 1999; Ghosh, 2000). Inadequate services are not only affecting living conditions at the household and community level, but also causing pollution of water, air and land at the city scale (Ghosh,

Table 5.4. Authorities Responsible for Urban Service Provision in the Municipal Corporation of Delhi (MCD)

Type of Service	Organization Providing the Service	Administrative Jurisdiction
• Water supply	Delhi Jal Board (DJB)	Delhi Government (State)
• Sewerage	Delhi Development Authority (DDA)	Ministry of Urban Development (Central)
• Garbage collection, transport and disposal	Conservancy and Sanitation Dept. (CSD)	MCD (Municipal)
• Street sweeping	Conservancy and Sanitation Dept. (CSD)	
• De-silting of stormwater drains	Conservancy and Sanitation Dept. (CSD)	
• Cleaning of public toilets	Conservancy and Sanitation Dept. (CSD)	
• Municipal parks, gardens and other green spaces	Horticulture Department	MCD (Municipal)
• Housing (public sector)	Delhi Development Authority (DDA)	Ministry of Urban Development (Central)
• Urban planning and development	Delhi Development Authority (DDA) Planning Department Town Planning Department	Ministry of Urban Development (Central) Delhi Government (State) MCD (Municipal)
• Slum and squatter settlement improvement	Slum & JJ Department	MCD (Municipal)
• Roads, bridges and public lighting	Engineering Department	MCD (Municipal)
• Drainage works	Public Works Department	Delhi Government (State)
• Construction of public institutional buildings	Public Works Department	
• Public transportion	Delhi Transport Corporation Delhi Metro Rail Corporation	Delhi Government (State) Ministry of Urban Development (Central) and Delhi Government (State) (Joint venture)
• Electricity	Privatized into six companies (formerly the Delhi Vidyut Board)	Delhi Government (State) oversees the Delhi Electricity Regulatory Commission (Regulatory body)

Source: Adapted from Kumar (1999)

2000; Nagdeve, 2004). At the same time, other aspects of urban development in the mega-city have jeopardized environmental quality, particularly the uncontrolled growth of industries and dramatic increase in the number of motorized vehicles (Ghosh, 2000). The *State of the Environment Report for Delhi 2001* characterized Delhi as the "most polluted city in the world" (TERI, 2001; 1). In the academic literature, Delhi is considered either the third most polluted city in the world (e.g., Ghosh, 2000) or among the top ten (e.g., Nagdeve, 2004).

Water supply:

The bulk of the municipal water supply in Delhi (87 %) comes from surface water sources, which include the Yamuna River as it flows through the city as well as water imported via canal and pipeline from the Ganga and Beas Rivers. The remaining 13 % of the municipal supply is mostly from local groundwater reserves (Ghosh, 2000). The DJB produces 2,955 million litres of treated water per day (mld) from the combined surface and underground sources (DJB, 2005). Water demand in the megacity, however, is estimated at 4,295 mld (DJB, 2005), leaving a deficit of about 1,340 mld. Consequently, households and the industrial sector are increasingly exploiting groundwater resources (Zérah, 2000a). Delhi has approximately 200,000 private tubewells, plus an unspecified number of handpumps (NCTD, 2004). As well, more and more Delhiites are purchasing bottled water or bulk supplies from private water tankers (Zérah, 2000a). The volume of water produced by the DJB is the equivalent of 213 litres per capita per day (lpcd); however, the actual amount is probably much less because of system leakages in the range of 30 % (Zérah, 2000a; Babu, 2003). Factoring in a 30 % supply reduction, the per capita average in Delhi would be around 149 lpcd.

Aside from the production gap, the DJB faces serious operational and financial challenges. Many of the main lines are in need of repair and the distribution system has thousands of unauthorized connections (Babu, 2003; Zérah, 2000a). Due to leakage, illegal connections, and provision of free water to public standposts in low-income communities, the DJB collects revenue for only half of the water it produces (NCTD, 2004). The water pricing system, moreover, is heavily subsidized, with the DJB collecting only about 35 % of production costs (GoI and GNCTD, 2001b). Poor cost recovery of the DJB is a major impediment to rational operation of the present system and to future expansion to meet the expected growth in water demand in Delhi.

The majority of Delhi households (75.3 %) obtain their drinking water from the tap, followed by handpumps/tubewells (21.9 %) and other sources (2.8 %)[3] (Census of India, 2001). Potable water supply coverage in Delhi is 95.8 % (Ghosh, 2000), although the high rate is deceiving as service is unreliable in terms of water quantity and quality (Zérah, 2000a; Ghosh, 2000). For instance, most households in the mega-city receive an intermittent rather than continuous, 24-hour supply and in some areas, duration of water availability is less than two hours a day (Zérah, 2000a; Zérah, 2000b). Also, the municipal supply is unpredictable because of low pressure, sudden breakdowns and annual summer shortages (Ghosh, 2000; Babu, 2003; Zérah, 2000a). Municipal water is purportedly safe when it comes out of the treatment plants, but the supply is vulnerable to contamination during distribution since the network is deteriorated. Leaky sewer lines add to the risk of piped water becoming polluted (Zérah, 2000a). Many Delhiites have to use pumps to obtain the low-pressure municipal water, which creates a suctioning effect and increases the risk of contamination from sewage (Zérah, 2000a).

Allocation of municipal water supply is highly inequitable across Delhi, with high-income areas generally receiving a better supply than low-income settlements (Ghosh, 2000). For example, Mehrauli in south Delhi and Narela in north Delhi receive a meagre 30 lpcd, whereas privileged areas like New Delhi and the Cantonment receive 462 lpcd and 509 lpcd, respectively (NCRPB, 1999).

Increasing groundwater abstraction, to compensate for limited municipal water availability, is causing widespread decline of the water table in Delhi (NCTD, 2004). Over the past few decades, the water table has dropped by 2-8 m in many parts of the city and by 8-35 m in the south and southwest zones (Rohilla et al., 1999; NCTD, 2004). The decline of the water table is especially significant because not all of Delhi's groundwater is fit for human consumption; in places, reserves are naturally brackish or saline and hence the potable supply is finite (Rohilla et al., 1999). Furthermore, groundwater quality has become degraded as a result of high nitrate and fluoride content, pesticides, heavy metals and sewage (NCTD, 2004; Rohilla et al., 1999).

[3] Other water sources include wells, tanks, ponds, lakes, rivers, canals and springs.

Sanitation:

In the sanitation sector, 78.0 % of Delhi households have access to a latrine or toilet[4] within the home, according to the 2001 census (Census of India, 2001). This percentage, which is fairly high, may reflect to some extent the under-representation of lower-income households in the census. The 22.0 % of households without a private latrine mainly utilize public toilet facilities and open spaces. Delhi's limited and unreliable water supply poses a constraint to good sanitation since householders do not always have water for bathing or to clean their toilets regularly (Ghosh, 2000). In addition, numerous public toilet complexes in the mega-city are non-functional because of lack of assured water supply (Chandola, 2003).

Sewerage service, the other half of the DJB mandate, is provided to approximately 55 % of Delhi's population (GoI and GNCTD, 2001b). Households without sewerage generally dispose of their human wastes by means of on-site sanitation or open defecation (GoI and GNCTD, 2001b). Similar to the water network, the sewerage system is not adequately maintained (Ghosh, 2000). Many sewer lines in the city are blocked with silt and solid waste or have collapsed (GoI and GNCTD, 2001b; Jain, 2003). Due to low supply of water, sewer flow is often inadequate which contributes to the silting problem. Blockages in the system cause overflow of sewage to storm water drains and promote formation of gases that decay pipe materials (Jain, 2003). The mega-city's sewage generation of 1,910 million litres per day (mld) exceeds the wastewater treatment capacity of 1,590 mld, and thus some 320 mld is discharged untreated into the Yamuna River (NCTD, 2004).[5]

The storm water drainage system in the city is also inefficient and prone to clogging (Rohilla et al., 1999). In the monsoon season, especially, low-lying areas become waterlogged and hence susceptible to water-borne diseases such as cholera, gastroenteritis, malaria and dengue fever (Rohilla et al., 1999; Ghosh, 2000).

Solid Waste Management:

Turning now to solid waste management, the authorities in Delhi are unable to handle the volume of garbage generated (Singh, 1999; Srishti and Toxics Link, 2002). In the MCD, garbage collection, transport and disposal are the responsibility of the Conservancy and

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[4] The category of latrines/toilets in the 2001 census includes pit latrines, water closets (flush toilets), dry latrines that require human wastes to be emptied periodically, and other types.

[5] After wastewater from Delhi enters the Yamuna River, the coliform count soars from about 7,500 coliform organisms per 100 millilitres of water to 9 million organisms per 100 ml. Indian water quality standards permit up to 5,000 organisms per 100 ml. of water (Nagdeve, 2004).

Sanitation Department (CSD). Municipal waste production is approximately 7,000 metric tonnes per day, which is an average of 0.5 kg per person per day (GoI and GNCTD, 2001b). According to waste generation surveys carried out in the mega-city, residents of low-income settlements produce about 0.2 kg per person per day, as compared to 0.8 kg in middle and high-income areas (Srishti and Toxics Link, 2002). The domestic waste is 80-85 % compostable (Ghosh, 2000).

As is the norm in Indian cities, householders in Delhi are responsible for bringing their garbage to receptacles at municipal collection points (i.e., primary collection). In addition to residential waste, collection points receive street sweepings, silt from drains, commercial wastes, and some industrial and hospital waste (Srishti and Toxics Link, 2002; Ghosh, 2000). At the collection areas, *safai karamcharies* (municipal cleaning workers) load the waste onto trucks for transport to disposal sites (secondary collection) (Singh, 1999; Ghosh, 2000). For the mega-city as a whole, collection efficiency is around 60 %; the remaining 40 % of the waste is left in streets, back lanes, open drains, parks and along railway tracks (NCRPB, 1999). Other problems related to municipal service include: irregular clearing of waste from collection points; insufficient number of receptacles or inconvenient location for residents; inadequate size of receptacles; lack of transport capacity; and organizational inefficiency (Singh, 1999).

About 98 % of collected municipal waste in Delhi is disposed of at three landfill sites located within the urban limits: Gazipur, Bhalaswa and Okhla (Srishti and Toxics Link, 2002). All of the sites are in populated areas (Singh, 1999). These facilities are rapidly filling up and new sites are planned (Srishti and Toxics Link, 2002). The three operating landfills are unlined, as are the older dumps in the city, and consequently groundwater is at risk of contamination from leachate (Ghosh, 2000; Nagdeve, 2004). None of the sites have provision for recovering landfill gases such as methane, which is a potent greenhouse gas (Srishti and Toxics Link, 2002). Although a major portion of the municipal waste stream is biodegradable, centralized composting has been undertaken on a limited scale in Delhi to date (Ghosh, 2000). Two plants, one run by NDMC and the other by the private sector, are operating at under-capacity, and a third MCD facility has shut down (DDA, 2004).

Parallel to the municipal waste system, Delhi has an estimated 100,000 waste pickers who collectively divert 10-15 % of the city's garbage (Rohilla et al., 1999; Srishti and Toxics Link, 2002). Waste pickers segregate waste – from streets, drains, open dumps, municipal

bins, landfill sites, and other places – into reusable and recyclable materials such as paper, plastic, glass and metals. They sell the materials to local *kabariwallas* (scrap dealers), who again sell them through a chain of medium and large dealers to recycling units throughout the city (Srishti and Toxics Link, 2002). The sector is important not only as a source of livelihood for the urban poor, but also in terms of conservation of natural resources and caretaking of the urban environment (Ghosh, 2000; Chaturvedi, 2003). Moreover, it is estimated that waste pickers in Delhi provide, in effect, a savings to municipal authorities equivalent to 20 % of the waste management budget (Shristi, 2002). Nonetheless, waste pickers endure poor working conditions, including low remuneration, lack of protective clothing and equipment, health and safety risks, harassment from police and municipal staff, and widespread social stigma (Chaturvedi, 2003; Choudhary, 2003; Srishti, 2002). Most waste pickers in Delhi are migrants from the poorer Indian states, with a disproportionate number of SCs and Muslims. Many are women and children, though their exact numbers within the sector are not known (Srishti, 2002).

5.6 The Urban Environment

In addition to impacts related to inadequate municipal infrastructure and services, the urban environment in Delhi is under stress from other anthropogenic causes. The Yamuna River has become severely degraded not only from raw sewage, but also huge quantities of industrial wastewater that the city contributes as well as agricultural wastes that originate further upstream (Ghosh, 2000; Nagdeve, 2004; TERI, 2001). In the Delhi reach of the Yamuna, fish populations no longer exist and water treatment plants must be periodically shut down because of extreme pollution levels (CSE, 2000a). The Supreme Court ordered a clean up of the Yamuna by the end of March 2003, yet little progress have been made and the river remains a "dirty drain" (Chandola, 2003; 16).

Air quality is another major concern in Delhi, with 30 % of the population suffering from respiratory problems (GoI and GNCTD, 2001b). Motorized vehicles, which have increased exponentially from 0.2 million in 1972 to 4 million currently, represent the primary source of air pollution (Nagdeve, 2004; NCRPB, 1999; TerraDaily, 2005). Several initiatives in recent years, such as the phase-out of leaded gas, conversion of public transport buses and auto-rickshaws to Compressed Natural Gas (CNG), and the construction of the Delhi Metro have helped to control emissions from the transportation sector; however, the sheer increase in

number of gasoline- and diesel-fueled vehicles on the roads has offset the progress made (Nagdeve, 2004; TerraDaily, 2005).

Industries, the second largest source of air pollution in Delhi, are located throughout the mega-city, including in residential zones (Ghosh, 2000; Nagdeve, 2004). Similar to the housing sector, industrial development has been largely unauthorized and in violation of city Master Plans (Ghosh, 2000). In the mid-1990s, the Supreme Court ordered over 12,000 polluting industrial units to relocate outside of Delhi, which has transferred the environmental burden mainly to peri-urban areas (Ghosh, 2000). A large number of industries remain in the city, however. Air quality legislation enacted by the central government has compelled some polluters in the mega-city to install pollution control measures (Ghosh, 2000). As a result of steps taken in the transport and industrial sectors, air quality in Delhi has improved, albeit marginally, over the past decade[6] (Nagdeve, 2004; Ghosh, 2000; Jain, 2004).

5.7 Squatter Citizens and Resettlement Policy

As noted above, the study community consists of a resettlement colony and a squatter settlement. Since Independence in 1947, the two settlement types have been closely intertwined in Delhi's history, as the resettlement colonies were literally "born through the demolition and re-development of some other place in the city" (Tarlo, 2000; 69). The places that gave genesis to the resettlement colonies, as it happened, were primarily the squatter settlements and dilapidated tenement slums located in central Delhi. Prior to Independence, Delhi did not have a large population of squatters. The situation changed, however, in the post-Independence period, with a large influx of rural migrants and growing numbers of the "settled" urban poor who were unable to secure affordable housing in planned settlements in the capital. The number of squatter huts, which was less than 13,000 in 1951, increased to 150,000 by 1975 and 480,000 by 1994, the last year in which a city-wide survey was undertaken (GoI and GNCTD, 2001a; MCD, 2005; WWF-India, 1995). Government sources estimate that, as of 2001, Delhi had approximately 600,000 squatter households in 1,100

[6] Pollutants such as carbon monoxide, nitrogen dioxide and lead have been reduced (Nagdeve, 2004). Levels of sulphur dioxide, total suspended particulates and fine particulates have also decreased, but remain above World Health Organization (WHO) guidelines (Jain, 2004). Further information about Delhi's environment is included in Appendix B.

settlements, representing a population of 3 million[7] (21.7 % of Delhi's total population) (GoI and GNCTD, 2001a; MCD, 2005).

Delhi's squatter population has risen to current levels even though government authorities have made concerted efforts at different times to evict or relocate them, predominately on the rationale that land was required by land-owning agencies for official uses in the public interest (GoI and GNCTD, 2001a). The *Slum Areas Act, 1956* and the first Master Plan of Delhi (1962-81) provided a legislative basis for the authorities to clear squatters from government land in the inner city. Squatter households that could provide proof of residency in Delhi prior to designated cut-off dates were given plots in resettlement colonies in predominately peripheral areas; those not meeting the criterion were simply dispersed (Kundu, 2002a; Kundu, 2004). Under the central government-directed Jhuggi Jhonpris Removal Scheme (JJRS), the Municipal Corporation of Delhi (MCD) relocated 50,000 squatter households to 18 resettlement colonies between 1961 and 1968 (GoI and GNCTD, 2001a).

Subsequently, during the National Emergency (1975-77) declared by then-Prime Minister Indira Ghandi, squatters from many parts of Delhi and residents of tenement slums in the walled city were displaced on a massive scale. The DDA, rather than the MCD, was the body responsible for slum clearance at that time.[8] Approximately 150,000 households were relocated to 26 additional areas, raising the total number of resettlement colonies in the city to 44 (some documents refer to 45 or 46) (GoI and GNCTD, 2001a). Following the Emergency, only 20,000 squatter households remained in the central core of Delhi (WWF-India, 1995). In all, about one million people were relocated, usually not voluntarily, in Delhi under the different resettlement drives carried out from 1961 to 1977 (WWF-India, 1995).[9]

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[7] The National Institute for Urban Affairs, however, contends that the city's squatter population is closer to 4 million in 1,500 settlements (NIUA, cited in GoI and GNCTD, 2001a).

[8] Since the 1960s, jurisdiction over urban slums and resettlement programs in Delhi has alternated numerous times between the Municipal Corporation of Delhi and the Delhi Development Authority; currently, the Slum and JJ Wing of the MCD has authority.

[9] Reflecting the climate of authoritative rule that existed during the Emergency, squatters were forcibly removed by DDA officials and police, often with little notice, and their dwellings flattened by bulldozers (Dayal and Bose, 1977; Tarlo, 2000). Resistance was met with tear gas, batons and guns (Dayal and Bose, 1977). The DDA became known during those years as the "Delhi Demolition Authority" (Sridharan, 1995). Controversial measures, moreover, were used in allocation of resettlement plots to the displaced. In some parts of the city, plots were contingent on men having to undergo vasectomies as part of a national sterilization drive (Tarlo, 2000). The urban poor in Delhi were thus profoundly affected by two prime objectives under Emergency rule: the beautification of the central city to be realized through elimination of JJ clusters and tenement slums; and the family planning campaign that used coercion to achieve its targets (Tarlo, 2000).

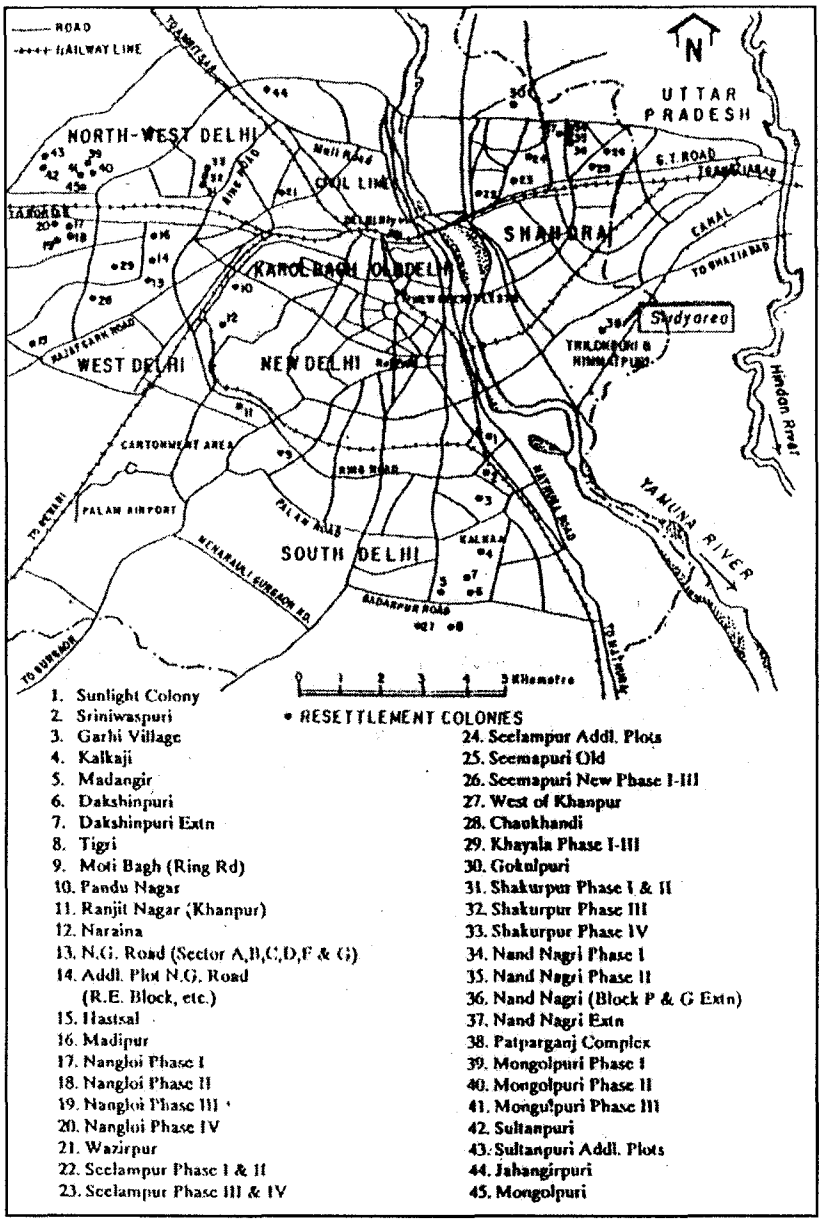
According to official thinking at the time, resettlement was justified as a program of "rehabilitation" rather than destruction as the urban poor were, ostensibly, to be provided with better living conditions elsewhere (Bose, 1995). Under the government schemes, however, households were not given a say as to where they were to be relocated. Since many JJ clusters and slum pockets, on an individual basis, had evolved as close-knit communities structured along kinship, caste, religious and regional affiliations, resettlement meant a severing of established social ties (Bose, 1995).

In the first phase of squatter clearance during the 1960s, a handful of resettlement colonies were established in the inner city, close to places of work and amidst higher-income neighbourhoods, whereas the rest were located in outlying areas (Kundu, 2002a). The resettlement colonies developed during the Emergency years in the 1970s, on the other hand, were all on the outskirts (see Map 3 below). Inferior sites were selected, such as low-lying land, along trunk drains, and next to major industrial areas and transportation routes (WWF-India, 1995; Kundu, 2004). Though proximity to industrial zones may have been advantageous in terms of employment, the generally low quality of sites has contributed to ongoing environmental problems in the settlements (Kundu, 2004).

Resettlement colonies were developed as planned spaces, with blocks of plots, street networks, and open areas reserved for community use. In the colonies dating from the 1960s and 1970s, the majority of households were allocated plots of 25 sq. yd. (21 sq. m.)[10] on subsidized rent (Birdi, 1995; Kundu, 2004). Residents were responsible for building their own shelters and, over time, considerable investment has gone into permanent housing (Risbud, 2002; Kundu, 2002a). Due to the constraints of plot size, housing has developed vertically in many instances with the addition of one or two stories above the ground-level structure (Tarlo, 2000). The level of social and environmental amenities tended to be low in the early stages and, in some resettlement areas, inhabitants had to wait years or decades to receive promised services (Ali, 1998; Bose, 1995). Provision of services, however, has gradually improved with increased government investment (Kundu, 2004). Compared to the squatters, residents of resettlement colonies have a reasonable degree of security, since most properties are leasehold and there is little fear of eviction (Kundu, 2004).

[10] Several of the older resettlement colonies from the 1960s had a small number of 80 sq. yd. plots and tenements, but these practices were discontinued and 25 sq. yd plots became the norm (GoI and GNCTD, 2001a; WWF-India, 1995).

Map 3. Resettlement Colonies in Delhi



Source: Ali, 1998

While the resettlement colonies have become an important component of the housing stock in Delhi, the fundamental approach of uprooting the urban poor and moving them to distant locales has had unforseen consequences and evoked much criticism. To begin with, turnover among the original allottees from the 1960s and 1970s has been high, on the order of 50 to 75 % in most colonies (Kundu, 2004). Among the reasons for the exodus were the difficult living conditions in newly-developing colonies, lack of employment opportunities, and disruption of former social networks (Ali, 1990; Bose, 1995.; GoI and GNCTD, 2001a). Understandably, people resented being relocated to far-flung places only to face loss of livelihood and other hardships (Kundu, 2004). Many allottees transferred their land for payment and some went to squat elsewhere in the city in hopes of receiving another plot (GoI and GNCTD, 2001a).[11] Through mostly unauthorized transactions such as benami deals,[12] higher-income groups have partially displaced the poor for whom the resettlement colonies were originally intended (Kundu, 2004).

Another unexpected result has been the proliferation of squatter settlements in and around all of Delhi's resettlement colonies. Surveys carried out in different colonies around the city show that hundreds of JJ clusters have emerged along roadsides and in open spaces set aside for parks, schools, temples and other public facilities (Ali, 1990; 1995; 1998; 2003). Collectively, the squatters represent more than 30 % of the total population living in the city's resettlement areas (Ali, 1998). The main factors that have drawn squatter households to the resettlement colonies are: availability of free land; access to community facilities; low cost of living; employment opportunities; friends and relatives living in nearby resettlement colonies; and support of local leaders and politicians (Ali, 1990; 1995; 1998). Thus, in what would have to be considered a key survival strategy in Delhi, large numbers of the poor have gravitated to communities of the less poor, a phenomenon that has been termed "slums within slums" (Ali, 1990).

From an urban planning perspective, the resettlement colonies have been dubbed "planned slums" (e.g., WWF-India, 1995; Ali, 1998; Agnihotri, 1994) or "glorified slums" (e.g., Bose, 1995), on account of the small plot sizes, substandard infrastructure and services,

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[11] Due to the rise in real estate prices in Delhi over the past few decades, a 25 sq. yd. plot in a resettlement colony is now worth between Rs. 100,000 and Rs. 400,000 (Cdn $ 3,000 to $12,000), a significant amount for most Delhiites (Risbud, 2002). As is common in Delhi, speculators entered the market and pressured residents into giving up their properties (Kundu, 2002a; 2004).

[12] In a benami transaction, the title of the property is in one party's name while the actual ownership is in another party's name, making it very difficult to trace the real owner.

and unsuitability of sites. As a result of the squatter influx the level of community infrastructure and services in the resettlement colonies, which was deficient to begin with, has become more strained (Ali, 1990; 1995; 1998). The resettlement colonies are also deemed slum-like because of generally poor maintenance of toilet blocks, open drains and parks (Ali, 1990; 1995; 1998). Low collection of user charges, including monthly rental fees charged to resettlement households, has limited the capacity of the authorities to deliver higher-quality services (Kundu, 2002a; Kundu, 2004). From the standpoint of government administration, the resettlement schemes have proven not only resource-intensive in the development phase, but also an ongoing liability for operating budgets (GoI and GNCTD, 2001a). Although the resettlement programs from the 1960s and 1970s have entailed considerable social, environmental and financial costs, the strategy continues to be an important component of urban development in Delhi (Kundu, 2004).[13]

[13] For more discussion of government policy regarding squatters and resettlement programs in Delhi from the 1990s to present, see Appendix B.

Chapter Six: Methodology

This chapter explains the basic approach, research design, and specific methods that I utilized for my fieldwork in Delhi. The chapter is divided into four main sections. The first section gives an overview of case study research and the mixed methods approach. The second section covers the criteria used in selecting the study community, the research design, and justification for the case study approach adopted. The third section describes the various research methods employed in the study community and at the macro- or city-level. The fourth and final section discusses several constraints and problems encountered related to the fieldwork.

6.1 Case Study and Mixed Method Approaches

6.1.1 Case study research

The case study is a form of social science research that seeks, through concentrated inquiry into a specific entity or case, to further understanding of complex phenomena (Stake, 2000; Yin, 2003a; Rossman and Rallis, 2003). For some time now, case studies have been a staple research strategy in a range of disciplines, including history, psychology, sociology, social work, political science, public administration, economics and urban planning (Yin, 2003a). Despite such widespread usage, the case study approach has garnered less attention in the methodological literature than other forms of research (Yin, 2003b). Perhaps as a result of this omission, case study research has been saddled with a number of misconceptions, such as being erroneously equated with qualitative research or ethnography, and has generated controversy over what case studies can be used for (Blaikie, 2000). Proponents of case study research, especially Yin (2003a, 2003b) and Stake (1995, 2000), have over the last decade or so clarified and extended the theoretical basis of case studies, arguing for its essential contribution to social science research. After a thorough review of the arguments for and against the case study approach, I have chosen to focus on one particular case of community-based environmental management in Delhi.

Though no universal definition of "case study" exists in the methodological literature, the term is generally understood as "a strategy for doing research which involves an empirical investigation of a particular contemporary phenomenon within its real life context using multiple sources of evidence" (Robson, 1993; 52). This conceptualization emphasizes that case study is a process of inquiry yet, as Stake (2000) observes, it is also the product of that inquiry. Consistent with the definition, case study ought to be viewed as an approach or strategy, rather

than a method or set of techniques (such as surveys or direct observation) (Stake, 2000; Blaikie, 2000). Accordingly, case study does not entail a particular way of collecting or analyzing empirical evidence (Gerring, 2004; Blaikie, 2000). As Blaike (2000; 215) puts it: "[A]ny method is regarded as being legitimate." The above definition also emphasizes that case study research typically involves numerous sources of evidence brought to bear on the particular focus. The main reason for variety in sources is that no single source of evidence is likely to capture the richness and complexity of the case, which includes the contextual conditions (Gillham, 2000; Yin, 2003b).[1]

6.1.2 Mixed methods

The term "mixed methods" refers to a research strategy that involves collecting and analyzing both quantitative and qualitative data in a single study – in other words, crossing the traditional quantitative-qualitative divide in social science research (Creswell, 2003; Tashakkori and Teddlie, 2003). In such designs, the quantitative and qualitative components can have equal importance, or either element can be dominant (Creswell, 2003). Mixed methods are employed by investigators in the basic belief that bringing together diverse types of information will provide superior understanding of their research problems than would be attainable from quantitative or qualitative methods alone (Tashakkori and Teddlie, 2003; Creswell, 2003). Since the mixed methods approach involves quantitative and qualitative methods and data, knowledge of both types of procedures is required (Creswell, 2003). Moreover, the process of gathering and incorporating the two forms of data necessitates extra time, quite often, on the part of the researcher (Creswell, 2003). Within the social sciences, mixed methods have been increasingly utilized to explore a wide range of substantive topics (Philip, 1998; Winchester, 1999; White, 2002). In the eyes of many, though not all, academics, the mixed methods approach has acquired recognition in recent years as a distinct mode of inquiry, leading Teddlie and Tashakkori (2003) to dub it the "third methodological movement."

While the fundamental rationale of mixed methods inquiry is that of producing better research, the methodological literature suggests several, more specific justifications of the approach. One major benefit cited is opportunity for triangulation across quantitative and qualitative sources (Creswell, 2003; Philip, 1998; Tashakkori and Teddlie, 2003).

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[1] See Appendix C for a more comprehensive discussion of the case study approach, including classification of case studies, the issue of generalization, and various rationales for case selection.

Convergence of data decreases the risk of incorrect findings arising from any particular method and increases the overall confidence in research results (Philip, 1998). Inexplicable divergence is also valuable, as it points to the need to reassess the research problem (including, possibly, the underlying conceptual framework) or to exercise caution in interpreting the significance of any one source of data (Brewer and Hunter, 1989; Tashakkori and Teddlie, 2003). Furthermore, the mixed methods strategy is advantageous when diverse types of data are required to address different facets of the research problem, such as a need to obtain breadth and depth in a single study.[2]

Further justification for mixed methods relates to strategies that utilize findings from one method to inform or enrich a subsequent method within the same inquiry (a sequential mixed methods design) (Teddlie and Tashakkori, 2003; Philip, 1998). For instance, small focus groups could be used to develop a set of hypotheses for later testing in an extensive formal survey. Alternatively, empirical results from a survey could generate new research questions or lead to design of a second, qualitative stage (Teddlie and Tashakkori, 2003; Philip, 1998). In addition, the methodological literature claims that mixed methods are useful in minimizing weaknesses or biases associated with individual procedures, conducive to plurality of views and perspectives in research findings, and capable of producing strong inferences or outcomes rooted in a broad empirical base (Creswell, 2003; Teddlie and Tashakkori, 2003; White, 2002). One last argument in favour of the mixed methods approach pertains to researchers who are concerned with the policy-relevance of their research findings. As such, utilization of quantitative and qualitative methods and data affords a measure of flexibility in communicating findings to non-academic audiences (e.g., politicians, planners and other decision-makers) who may not be receptive to entirely qualitative approaches (Philip, 1998).

6.2 Community Selection and Research Design

6.2.1 Selection criteria

I chose the PLUS Project site at Sultanpuri in western Delhi as my case study on several grounds. My personal values and biases, admittedly, played a part in the decision-making

[2] In this situation, for example, a quantitative survey used to generalize to a population could be combined with in-depth, qualitative interviews of selected individuals for more nuanced understanding (Creswell, 2003). Similarly, in a mixed methods design featuring different types of research questions (e.g., exploratory/inductive and confirmatory/deductive questions), the researcher can utilize various methods/data to address the range of questions simultaneously in the one study (Teddlie and Tashakkori, 2003).

process. After having met with a number of key informants in Delhi and visited a number of low-income communities during the early stages of my research, it became apparent to me that Sultanpuri is, first of all, noteworthy from an environmental perspective. Compared to the situation of most low-income settlements in the city, where community-based environmental initiatives have not been a priority of government or civil society, the PLUS Project is ground-breaking because of its explicit focus on community management. Furthermore, the PLUS Project is unusual on account of its multi-faceted approach to environment. Secondly, because the PLUS initiatives had begun in 2001 and several initiatives were ongoing at the time of my fieldwork in 2003 to early 2004, I considered the timing advantageous in terms of the diversity of data sources that would be available (e,g., community residents who had been actively involved, the NGO, other external stakeholders).

Thirdly, the Sultanpuri site, comprising both a planned resettlement area and an unplanned squatter colony, afforded an opportunity to learn about the environmental conditions and challenges of two major categories of low-income settlements in Delhi. Though the two settlement types added more complexity to the case, I considered this a positive. Fourthly, another consideration was the PLUS Project's enabling approach to development. PLUS has employed a community-oriented and participatory strategy that concentrated on building grassroots institutions in slums, developing local capacity for environmental management, and creating awareness about citizens' rights and responsibilities of various government departments. The PLUS Project, moreover, has been innovative as far as promoting new linkages between low-income communities and supportive stakeholders that could further the possibility of the urban poor gaining greater voice in the political and decision-making process. Thus, philosophically, I found the fundamental approach and goals of the PLUS Project to be compelling.

Fifthly, from an academic perspective, I felt that Sultanpuri would make for a worthwhile case study since there have been successes, along with an element of failure, in community management efforts over the past several years. Based on my preliminary investigation, the PLUS project in Sultanpuri has achieved mixed results with respect to the various environmental activities undertaken to date. As a researcher, I see merit in examining the less-than-totally-successful case and believe that such investigation represents a bonafide contribution to the literature.

My selection of Sultanpuri, therefore, derives primarily from what Stake (2000) refers to as intrinsic interest in the case. For a variety of reasons, I am interested in this case in and of itself. I value this case most highly, not because of what was actually achieved but, rather, what was attempted; in other words, I believe that the most important aspect of the case was the fundamental process – the onus on community management, the holistic approach to environment, and the attempt to effect systemic change in the relationship between a marginalized community and the larger society. It is this process, which happened to take place at Sultanpuri, which is at the heart of my interest in the case. Accordingly, as I believe the case itself has substantial merit, my main priority is to explore its essential features and complexities.

Of the different sorts of justification for case selection in instrumental case research that have been advanced by Yin (2003a, 2003b), my rationale in selecting Sultanpuri corresponds most closely to the atypical or unique case. To use Yin's terminology, Sultanpuri is not an exemplary case because, while a broad range of community-based environmental initiatives were attempted, outcomes were partial rather than clear-cut successes. Nor can Sultanpuri be considered a representative case of low-income communities in Delhi, in light of the large number and diversity of these settlements. Moreover, Sultanpuri cannot be the critical case of community-based environmental management, as relevant theory is not sufficiently well-formulated to permit such testing. On balance, then, Sultanpuri amounts to an anomalous case in Delhi, more along the lines of an urban experiment that I believe is inherently important. I would add, in hindsight, that I followed Stakes's advice to choose a case that holds abundant prospect for learning. In short, then, I chose Sultanpuri, deliberately, as an unusual case of much intrinsic value from which I felt I could learn a lot as a researcher.

6.2.3 Research Design and Justification

My research utilizes the PLUS Project site in Sultanpuri, west Delhi, as a case of community-based environmental management in a low-income setting in urban India. The study community features two types of contiguous settlements, that is, a larger, planned resettlement area within which a smaller squatter colony is situated. For the most part, I look at the community holistically, with the two types of settlements as functional parts. I examine four different environmental sectors that have been taken up through the PLUS Project in this community: water supply, sanitation, solid waste management, and municipal park planning.

Through this research, my overall goal is to better understand the circumstances (both internal and external to the community) under which residents of low-income settlements can improve their living conditions and manage their local environment, either through mutual-help efforts or with the assistance of supportive external actors. Consequently, the research focus is primarily at the local (community) level and secondarily at the macro (city-level) scale.

In terms of Yin's (2003a) three-fold typology of case studies, my research is a hybrid of descriptive-explanatory. This assessment is based on Yin's contention that the nature of the research questions drives the eventual form of the case study. I justify my use of the case study approach primarily on the basis of the inherent complexity of the real-life phenomenon that I am investigating. The methodological literature emphasizes that the intensive inquiry characteristic of the case study approach is especially suited to furthering understanding of complex, real-life subjects (Stake, 2000; Yin, 2003a, Rossman and Rallis, 2003). Furthermore, my project has the required specificity for a case study. I have chosen as my case an actual place that is bounded geographically, temporally, and in terms of a substantive focus. In addition, the case study approach is consistent with a fundamental premise and direction of my research, which is that community-based management must be understood in context (Douglass, 1995; Douglass et al., 1994).[3]

To reiterate from Chapter One, my three research questions are as follows:

1) *What are the household- and community-level facilities and services, practices, and problems regarding environmental management in low-income settlements in Delhi (i.e., water supply, sanitation, solid waste management, and use of open space)?*

2) *What is the nature of community-level social capital, that is, social integration and linkage in Woolcock's (1998) conceptualization and, by extension, how predisposed are local residents for collective action generally?*

3) *How effective are collective action efforts to improve environmental conditions in low-income settlements, and to what extent are communities able to overcome typical problems of collective action (e.g., free riding, dealing with conflicts)?*

To answer my research questions, evidence was collected at two geographic scales during my fieldwork: the community level and city level. In terms of emphasis, data collection

[3] A more detailed justification of the case study approach taken in Sultanpuri is provided in Appendix C.

at the community level constituted about 80 percent of the overall research time and effort, and macro-level data collection the other 20 percent. I utilized mixed methods in my fieldwork, consisting of several quantitative and qualitative approaches. Community-level research consisted mainly of a random household survey of the entire study area and three smaller purposive surveys. Groups targeted in the purposive surveys were: 1) residents who have been active on various environmental committees in the community; 2) local leaders (who were also residents in the community); and 3) local external stakeholders (non-residents). Other forms of community-level research included direct observation of household- and community-level environmental management practices, photography, community mapping, and a literature search of relevant documents from my NGO affiliate. At the city level, I carried out semi-structured interviews with key informants and did a literature and internet search. I elaborate on each of these types of data collection methods in the section below devoted to fieldwork procedures.

A matrix is provided in Table 6.1 below that relates the specific community- and city-level methods to my three research questions. As the matrix shows, several methods were utilized to collect data pertinent to each research question and the relative importance (or contribution) of each method to individual questions is been ranked qualitatively. The table also reflects that the bulk of the data collection occurred at the community level.

6.3 Description of Fieldwork Procedures

My fieldwork was completed over three trips to India that totaled ten months. The first visit was a short reconnaissance trip in January-February 2002, while the second trip was made from January to May 2003 and the third trip from September 2003 to January 2004. The purpose of my initial trip to Delhi in 2002 was mainly to get the "lay of the land" as well as make contact with Indian NGOs and academics working in the area of low-income communities in the city, while the two subsequent trips in 2003 were devoted to carrying out the field research. In the ensuing section, I discuss the fieldwork logistics, research procedures used in the study community and at the city level, and methodological issues that were relevant to my project.

Table 6.1. Research Questions - Methods Matrix

Research Questions	Methods								
	Community-level							City-level	
	Random HH Survey	Purposive Surveys			Photography/ Site Map	Direct Observation	Lit search re: NGO affiliate	Key Informant Interviews	Lit/Internet Search
		Committees	Local Leaders	Stakeholders					
1) Environmental conditions	✓	✓	–	✓	✓	✓	✓	–	–
2) Social capital	✓	✓	✓	✓	–	–	✓	✓	✓
3) Collective action	✓	✓	✓	✓	–	–	✓	✓	✓

Key to symbols used:

✓ Primary data source

✓ Secondary data source

✓ Tertiary data source

– Marginal data source/ Not applicable

6.3.1 Preliminary activities and local affiliations

On my reconnaissance trip to India in 2002, I utilized the assistance of Development Alternatives (DA), an organization based in south Delhi with whom I had previously worked in the 1990s. DA is a prominent Indian NGO that, since its establishment in 1983, has worked in the areas of environment, development and appropriate technology. DA generously provided me with use of their office space, computer facilities, library, and contacts in Delhi, which was a big asset. I began by short-listing potential community research sites in Delhi, which I learned about from other NGOs working in these areas as well as going on site tours. The site tours were beneficial in assessing the local environmental conditions, access to environmental infrastructure and services, and participation in community management. All told, I spent about three months in the field (the entire reconnaissance trip and the first month of my second trip) becoming familiar with the Delhi slum context and choosing my community research site.

The amount of preparation I needed was partly a reflection of the magnitude of urban poverty in Delhi (over 1,200 low-income communities, representing some 4 to 5 million inhabitants), as well as the complexity of the low-income settlements themselves. As discussed in Chapter Five, the various categories of low-income settlements in Delhi represent a range of tenure security, environmental infrastructure, and level of municipal services. The lack of documentation on low-income settlements in Delhi was also a factor, as I needed time to get a sense of what could be deemed "community management" in this setting. I should add, too, that the NGO scene in Delhi is complex, with more than 100 organizations active in the city's slums. I devoted some time to deciding which group to work with in the field. After duly considering the potential merits of the Sultanpuri case and receiving comments from my academic committee at the University of Toronto, I decided to do my research in the aforementioned community.

I had affiliations with a second Delhi-based NGO during the course of my fieldwork, namely, the Saahasee Society for Community Empowerment and Urban Transformation (formerly known as Sharan Society for Service to the Urban Poor). Whereas DA was especially helpful in the early stages of my project, Saahasee had an important role in the main fieldwork phase. Saahasee, an NGO that has experience working in Delhi slum communities since 1981, had been actively involved with the PLUS Project in Sultanpuri since its inception. Because of the convergence between my research and their PLUS-related work, Saahasee was

interested in working with me. The NGO was, in effect, my gatekeeper to Sultanpuri, without which I could have not done the community-level research. Saahasee also provided critical feedback on my research, useful guidance while in the field, assistance with training field assistants/translators, and use of their project office at Sultanpuri.[4]

6.3.2 Community-level research

The community-level component of the fieldwork was undertaken from March to May 2003, and from September 2003 to January 2004. Interviewing in the community was conducted almost entirely in Hindi. As my Hindi was at a basic level, I used field assistants/translators to carry out the research procedures. Initially, I hired four Indian field assistants/translators (two men and two women) to administer my random household survey in the study community, rotating who I went with each day. After a couple of weeks of survey work, however, I was not satisfied with the quality and consistency of the data collection. At that point, I decided it would be better to work with one assistant only and attend all of the interview sessions. I then hired a different Indian woman for this purpose. My plan was to work with this one person for the duration of the fieldwork, but she developed health problems, which necessitated hiring a second woman halfway through the research. I continued to work with both women during the latter part of my fieldwork, though with only one assistant in the field at a time (i.e., each assistant worked on different days of the week). Both women were fluent in Hindi, had good command of English, and were comfortable being in a low-income settlement such as Sultanpuri.

While carrying out my fieldwork in the study community, I used the PLUS Project office at Sultanpuri as a base. The office, which was a converted house in the resettlement area, was used by PLUS for administrative purposes, meetings and program-related activities. I did not have any space there to call my own, but could sit on the floor with the Saahasee staff and community members who were there on any given day. Most of my day was spend out in the community doing survey work or interviews, so I did not actually spend a lot of my time in the PLUS office. I did, though, use the office as a place to meet my field assistants in the morning, have discussions when needed with the PLUS staff, and take lunch. My research assistants and I worked from Monday to Friday every week. I was physically present for all of the interviews

[4] Further information about fieldwork logistics is provided in Appendix C.

in Sultanpuri, as I felt that this was the best way to learn as much as possible about the community and also ensure quality control.

Random household survey:

The first phase of community fieldwork was a random household survey of the entire study area (both the resettlement area and squatter colony). The purpose of the survey was to gather quantitative data related to my research questions about environmental management, social capital and collective action, as well as obtain basic socio-demographic information about local residents. I used a formal questionnaire instrument that I had previously developed in Toronto and subsequently adapted while in Delhi. The survey was administered with the assistance of my two field assistants/translators. The number of households surveyed was 114 (about 8 % of total households in my study area), which took seven weeks to complete during September-October 2003. Of the 114 households, 98 were from the resettlement area and 16 were from the smaller squatter settlement. Each interview took between 45 minutes and one hour and 15 minutes to complete.

The questionnaire instrument had a total of 55 questions, structured into four main sections (included in Appendix C). The Socio-Economic section inquired about demographic information, migration and mobility aspects, and household expenditures and assets (12 questions). The Community Issues section solicited the views of residents about overall environmental conditions in their settlement and other types of problems that they face (total of 2 questions). The third section, Household Environmental Management, dealt specifically with water supply, sanitation, solid waste and use of open space. This set of questions focused on household facilities and practices, utilization of community infrastructure and services, level of satisfaction with community infrastructure and services, and costs incurred (total of 16 questions). The fourth section of the questionnaire, Social Networks and Social Capital, looked at community members' participation in groups and informal networks, and probed issues of trust, community solidarity, information and communication channels, social cohesion, collective action and political involvement (total of 25 questions). Following interviews, data were collected, through visual observation, on the state of open drains outside houses.

The design of my questionnaire, particularly the Community Issues and Environmental Management sections, was modeled after the household survey instrument employed by Daniere et al. (n.d.) in their study of environmental management and social capital in southeast

Asian slum communities. The Social Capital part of my questionnaire drew heavily from the World Bank's (2002) Integrated Questionnaire for the Measurement of Social Capital (SC-IQ), both in terms of the categories of data sought and the specific questions chosen. Thus, similar to the World Bank's design, my questionnaire covered social structures (groups and organizations, informal networks), cognitive dimensions (trust and solidarity), ways in which social capital operates (information and communication channels), and applications or outcomes (collective action and political action). My questionnaire has 23 questions from the World Bank's SC-IQ, including 18 questions from the shorter, "core" version and 5 more from their longer version.[5] In addition, two social capital questions are from the above-mentioned questionnaire of Daniere et al. (n.d.).

A random, systematic sampling strategy was employed in the household survey. In the study community, all plots were numbered in the resettlement area, and all houses were numbered in the squatter settlement. I surveyed every tenth plot in the resettlement area and every tenth house in the squatter colony. Arbitrarily, I chose plot/house numbers ending in "5," and accordingly surveyed households from resettlements plots #5, 15, 25, and so on, and squatter houses #5, 15, 25, etc. Occasionally, plot/house numbers ending in 5 could not be used for a variety of reasons; sometimes houses were padlocked (the family may have gone back to their village or somewhere else), or houses were obviously abandoned some time ago and no one was presently living there. Alternatively, some houses were occupied but no one was home at the time, or else people were at home but busy when we called or else not willing to be interviewed. In cases where no one was at home, we returned on another day in an attempt to do the interview, and in situations where residents were busy at the time, we tried to arrange a more convenient time. When these options did not work, we interviewed instead one of the next-door neighbours (i.e., the plot or house number ending in 4 or 6).[6]

Not surprisingly, my presence as a researcher in Sultanpuri, where a white person is a rarity,[7] elicited a range of reactions from community members. In the course of the survey work, reactions of residents ranged from genuine interest to curiosity to boredom to

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[5] The World Bank (2002) has two versions of the social capital questionnaire posted on their website, a long version (102 questions in total) and a shorter version consisting of core questions recommended as essential (27 questions in total).

[6] See Appendix C for more elaboration on the sampling strategy in regards to multiple-household plots in the resettlement area and implications for sample representativeness.

[7] During my fieldwork in Sultanpuri, I saw another white person only once – a fellow who worked for one of the funding agencies of the PLUS Project and came to the project office for an hour or so one day.

occasionally negative responses. Several people expressed "survey fatigue" (Saahasee had conducted a community-wide survey about a month before mine) or felt that surveys were pointless (i.e., they did not lead to tangible changes or improvements in the community). On a few occasions, local residents on the street or in the lane cursed me in Hindi (my field assistant told me they were drunk at the time). A community member told me that most people in the area would assume I was a Christian missionary. One day, as I walked through a lane in Sultanpuri, a young boy called me a ghost (or evil spirit) in Hindi.

The great majority of participants in the random survey, as well as the purposive surveys I did in the community, however, were very cooperative and respectful. Several respondents remarked that I had come a long way to ask about their lives and their environment. One woman who had, during the course of the interview, voluntarily disclosed a serious personal issue said "thank you for asking about my problems." I recall one particularly gratifying moment as a researcher, when a young woman we had just interviewed said that she had learned something from the experience, which I understood to mean that a number of the questions themselves had been educational for her. A different woman, following the interview session, commented that my survey was different from others she had been exposed to, in that some of my questions asked what she thought about something, in contrast to other surveys that had, apparently, been solely about obtaining socio-demographic data.

I consider myself fortunate as a researcher, too, to have had a few episodes of levity while implementing the survey. One memorable experience happened when we were interviewing a mother in a small house, with four or five of her small children sitting around. Partway through the session a rat suddenly appeared, climbing upside down along an electrical cord suspended a foot or two over our heads. Upon seeing the rat, all the children screamed and laughed and ran out of the house, pots and pans and other household effects flying, after which we finished the interview outside.

Overall, it worked out well having women as my field assistants, because about two-thirds of respondents were female. The female field assistants helped to establish rapport with women respondents and probably seemed less intimidating to community members in general. Even with a female research assistant, though, a number of women participants in the survey did seem shy about, or unused to, expressing themselves verbally with outsiders. This is not unexpected in Indian society, especially in the case of women who were migrants to Delhi from rural villages in other states. Other women respondents, however, were very

communicative and talked quite freely. This openness included very personal subjects, such as their husbands' drinking, physical abuse in the home, problems with children, health issues, and financial difficulties. In these situations, when respondents wanted to express important concerns and problems in their daily lives, we attempted to be good listeners and sometimes referred people to Saahasee for assistance.[8]

Purposive surveys:

Survey #1 - Environmental committee members

In addition to the random household survey, I undertook three smaller, purposive surveys in Sultanpuri. The first of these was a Committee Members survey, comprised of all residents in the study area who were members of local organizations established under the auspices of the PLUS Project, that is, the Water Committee, Sanitation Committee, Solid Waste Management Committee and Parks Committees (three of the latter). Since the committees had been actively involved in most of the environmental initiatives to date in the study community, these individuals were well-informed about local conditions as well as related programs and activities that had occurred. The primary purpose of the survey was to examine the process of grassroots collective action to improve the local environment in Sultanpuri (Research Question #3) and, secondarily, to characterize the committees in terms of structural, community-level social capital (i.e., social integration and vertical linkages) (Research Question #2). The survey, which took about six weeks to finish, was done in November-December 2003 and the total number of people interviewed was 44.

The data collection method utilized for the committee members survey was more comprehensive than in the random survey. All committee members were given the same structured questionnaire used in the random survey and, additionally, 25 of these individuals were interviewed with a different set of open-ended questions in a semi-structured format (see Appendix C). Thus, for the majority of committee members, the interviews had two parts. For the semi-structured component, two sets of questions were used, depending on whether the respondent was a leader or member-at-large. Leaders were given a set of questions devoted to background information about their particular committee, including its purpose or objectives, formation, membership composition, activities, accomplishments and failures, governance

[8] See Appendix C for more detail on the random survey pre-testing phase, survey administration procedures, and effects of conducting interviews in private (inside respondents' houses) vs. in public (in the crowded lanes).

aspects, interaction with other local organizations, and linkages outside the community. Members, on the other hand, were posed another list of questions that focused on their personal involvement, motivation, committee governance dimensions, and benefits and costs of participation. Finally, leaders were given the same set of questions about personal involvement as the members.

Survey #2 – Community Leaders

A second purposive survey was carried out with local residents of Sultanpuri who had some form of leadership status, apart from the environmental committees, in the community. This group consisted mainly of *pradhans* (local "chiefs" of individual lanes or a group of lanes), who were all men. I also interviewed several women who were formal or informal leaders: two who described themselves as unofficial pradhans in their neighbourhoods, the president of the *mahila mandal* (women's organization), and the local municipal councillor. For the sake of clarity, I will henceforth refer to this group of people as the community leaders, as distinct from the committee leaders discussed above. I did 12 such interviews with community leaders over a two-week period in December 2003. This number included all of the pradhans in the study area, except for two people whom I was not able to meet with because they were out of the community during weekdays.

Community leader interviews, like those with the environmental committee members, were conducted in Hindi and consisted of two components: the household questionnaire, plus a semi-structured session with a series of open-ended questions (see Appendix C). The semi-structured part was intended to solicit information pertaining to existing social structures in the community (Research Question #2 on social capital) and, to a lesser extent, collective action and governance issues (Research Questions #3 and #4, respectively). More specifically, open-ended questions covered topics such as personal involvement in a leadership capacity, history of the area/current problems, leadership constituency, social networks within the community, linkages with external actors, and community cohesiveness.[9]

Survey #3 – External Stakeholders:

The third purposive survey was conducted in December 2003-January 2004 with local external stakeholders, that is, people who did not reside in the study area but had a direct connection to

[9] Further information about the Community Leaders survey is contained in Appendix C.

the community, either through involvement with the PLUS Project or work affiliation. The names of these individuals were obtained through Saahasee. I did a total of 17 interviews with representatives from the following groups:

- NGOs: 2 Plus Project staff and 1 manager from Saahasee, 1 representative from CARE India, 1 representative from Sewa Bharti (another NGO that operated in the community) (5 interviews)
- Senior government officials: 1 Executive Engineer from the Delhi Jal Board, 1 Senior Scientist from the Central Ground Water Authority, and 1 Deputy Director from the Horticulture Dept. (3 interviews)
- Field-level government officials: 3 area officials from the Sanitation Dept., 2 area officials from the Horticulture Dept. (5 interviews)
- Consultants to the PLUS Project: 1 private sector engineering consultant, 1 NGO consultant from Shristi (an Indian NGO concerned with waste management issues) (2 interviews)
- Others: 1 waste picker, 1 attendant at the community toilet block (2 interviews)

The purpose of the stakeholders survey was severalfold: to obtain background information about the PLUS Project, to examine the quantity and quality of vertical linkages between the community and external actors (Research Question #2 on social capital), and to help characterize joint efforts undertaken to date (Research Question #3 on collective action). As indicated in the Research Questions-Methodologies matrix above, the stakeholders survey was an ancillary, rather than a primary, data source. The method utilized was semi-structured interviews (the household questionnaire not being used since respondents were non-residents). Questions posed to stakeholders focused on the nature of their association with the study community, specific involvement in the PLUS Project or provision of environmental services in the area, relationships with the community, interaction with other external actors, and attitudes towards community management (see Appendix C).

Visual observation, photography and site mapping:

I utilized direct observation, photography and mapping in the community-level research to provide a visual account of the community that would complement the survey data, especially in regards to the environmental research question. Direct observation, therefore, centered on household facilities and community infrastructure related to environmental management, provision of environmental services, and use of open space (local parks and lanes). Observations were not carried out in a systematic way; rather, visual inspection was an ongoing activity whenever I was in the community. The random household survey afforded a good opportunity to observe household facilities such as taps, water storage vessels, latrines and dustbins. Through tours provided by my NGO affiliate as well as local residents, I was able to see first-hand all of the community infrastructure, which included the public standposts, handpumps, rainwater harvesting project, open drainage system, community toilet complex, garbage collection points, compost pits and parks. From being in the community on a daily basis, I was able to witness provision of services like garbage collection, drain cleaning and water distribution in the resettlement area and squatter settlement, as well as informally monitor how open spaces were being used.

I took photographs in the community, primarily of the household facilities, infrastructure and services as noted above, as well as social life in open spaces like the lanes and parks. Discretion was exercised with the photography, not only out of respect for the privacy of local residents but also because I did not want to appear like a gawking foreigner, or arouse suspicions and hostility in the community. The need for sensitivity here was driven home to me during my first fieldwork trip, when I decided to ask one of my Indian assistants to take some pictures (on his own) because I was not entirely comfortable at that stage with the idea of doing so myself. My assistant was able to take some photos, but informed me that a group of housewives had challenged him about taking pictures in their lane. I sought out the advice of my NGO affiliate on this matter and they advised waiting on the photography till the end of my fieldwork, when most local residents would have seen me around or heard about me. Accordingly, I took my own photos during my last week of fieldwork in the community on the second research trip, doing it all on one day. I made sure to ask community members for permission beforehand to take pictures in situations where individuals would be identifiable, and did not encounter any problems.

A land use map was made of the community, showing the residential areas, community

infrastructure, open areas, temples, shops, and lanes and streets. To construct the map, I made detailed plans with paper and pencil of each neighbourhood in the community, which involved recording features and pacing off distances. Later, when I returned to Toronto after the fieldwork, I combined the neighbourhood plans to make the composite community map, using the drawing tools from Microsoft Word. The final, computer-generated map was produced in colour at 1:1300 scale.

Document search:

Documents about the study community were obtained from Saahasee, my NGO affiliate, and CARE India, primarily in the form of internal working or reporting documents related to the PLUS Project. These documents included the original PLUS Project proposals from CARE India and Saahasee, a situational analysis of the community (prior to PLUS), strategic action plans, project files and reports, minutes of meetings, correspondence with external stakeholders, and a newsletter called *PLUS News*. Most of the PLUS materials were written by senior staff of Saahasee or CARE India and available in English. In addition to the PLUS documents, Saahasee's most recent Annual Report (2002-03) and website, as well as the CARE India website, provided background about the mission, objectives and programs of the two NGOs and general information about the communities where they worked.

Another set of documents to which I had access was a by-product of the PLUS Project, but originated within the community rather than the NGO. The documents included meeting minutes of the local environmental committees, written requests or complaints by residents sent to local politicians, and Right to Information applications submitted to various government officials. These materials were in Hindi, written either by community members or PLUS Project field-level staff on their behalf. Selected Hindi documents, like the environmental committee minutes, I had my research assistants translate into English.

6.3.3 Macro-level research

The purpose of the macro-level (or city-level) research was essentially to situate my case of community-based environmental management within the broader issue of slums in Delhi. More specifically, I sought to find out whether the form of community-NGO-government partnership attempted at Sultanpuri could be considered a departure from traditional structures that have served to marginalize the urban poor in the city. However, since the primary focus of

my project was at the community level, I limited the amount of city-level research I undertook. Macro-level data collection consisted of interviews with key informants in Delhi, as well as a literature and internet review of Indian sources.

Key informant interviews:

Key informants at the city level included individuals who have wide-ranging awareness of urban poverty, environment and slum issues in Delhi but not necessarily specific knowledge of the study community. Over the course of my two fieldwork trips, I met with a total of 14 key informants from the following groups:

- Academics: 2 professors from Jawaharlal Nehru University, 1 professor from the School of Planning and Architecture, 2 faculty members from the National Institute for Urban Affairs (total of 5 interviews)
- Government: 1 senior official from the MCD Slum and JJ Department, 1 planner from the National Capital Region Planning Board, 1 representative from the Housing and Urban Development Corp. (HUDCO), 1 director from the Human Settlement Management Institute (total of 4 interviews)
- NGOs/Donor agencies: 4 representatives from Indian NGOs, 1 staff member from the Cities Alliance/World Bank (total of 5 interviews)

Interviews with key informants were conducted by means of a semi-structured interview guide, included in Appendix C. I formulated the questions based on my information needs and review of the urban governance literature pertaining to Delhi. The guide is divided into four sections: general slum problems and issues in the city; urban environment and community-based management; urban governance in Delhi; and specific governance-related topics.

Literature and internet search:

The literature and internet search was oriented towards contextual information on slum issues, poverty, the urban environment, and city governance in Delhi. Certainly, Delhi has a wealth of academic and non-academic literature, much of it in English, available from university and government libraries, publishing houses, bookstores, NGOs and other civil society organizations. I found many useful publications, especially, at the libraries of the Human

Settlement Management Institute, the National Institute for Urban Affairs, the Council for Social Development, and the Indian Social Institute. Through the libraries, I was able to access various Indian journals.[10] From a number of environmental NGOs based in Delhi (e.g., Centre for Science and Environment, Toxics Link, Development Alternatives and TERI), I obtained reports on urban environmental issues. I also found newspaper articles related to slums, urban governance and the environment in English dailies like *The Times of India* and *Hindustan Times*. Government documents were obtained from several departments of the Municipal Corporation of Delhi, the Delhi Government, the National Capital Regional Government, and the Central Government.

Many of the larger NGOs and other members of civil society in Delhi have websites, including groups active in the city's slums as well as numerous environmental organizations. Quite a few of these sites have online reports and publications that I downloaded. The local, regional and central government bodies, though not all departments, have websites also, generally in Hindi and English. Within the Municipal Corporation of Delhi, for example, the Slum and JJ Wing and the Public Works Department do not have sites. Still other departments have minimal information available online. Several government agencies, however, like the Delhi Water Board, the Delhi Development Authority, and the Housing and Urban Development Corporation (HUDCO), have very detailed and informative websites.

6.4 Constraints and Problems Encountered

As would probably be expected when doing cross-cultural research in a developing country, my research did not go entirely smoothly. In truth, I found the fieldwork to be a major challenge from start to finish, though one that I relished. I will henceforth describe the main difficulties I faced, which were of two kinds: basic constraints related to the fieldwork process in the study community and larger city, and more specific problems related to several of the research methods that I employed.

6.4.1 General constraints

Personal safety was a concern of mine throughout my fieldwork in the study community and was a factor in how I conducted the research. Sultanpuri had a reputation as a dangerous place

[10] Examples of useful journals include *Economic and Political Weekly, Shelter, Urban India, Down to Earth, Social Change, Journal of Indian Water Works Association, Indian Journal of Public Administration* and *Innovations in Civil Society*.

- for locals, non-locals, and outsiders like me. In fact, according to one Delhi newspaper, Sultanpuri has the highest level of crime and violence in the city (Hindustan Times, 2003c). Much of the crime, it would appear, is drug-related and local dealers are well-established in the area. Quite a few residents cautioned me and my field assistants to be careful and never stay in the community after sunset.

Early on in my random household survey, after one of my field assistants told me that a group of guys had followed her one morning as she walked into the community from the bus stop, I expressed concerns regarding our security to my NGO affiliate. The director of the organization advised me to henceforth take certain precautions in the community, namely: having an escort at all times in the community; restricting my research to hours when the PLUS Project staff were physically present at their local office; informing the PLUS staff about where we were going and when we expected to return to the project office every day; and vacating from any situations that were potentially threatening. While these were sensible measures under the circumstances, I felt a loss of independence and thereafter had to limit my research time in the community in accordance with the NGO hours, which meant no work on weekends, evenings, and statutory and religious holidays. Moreover, since the NGO tended to have a short working day (about 9:30 AM to 4:00 PM), I was not able to work at the pace I had hoped. In view of the safety issue as well, I needed to hire research assistants/translators to accompany me the entire time I was in the Sultanpuri community, which meant going over budget for this expense.

In addition to the security issue and need for precautions, a few other, unanticipated factors, mainly related to timing, impeded my fieldwork in the study community. For instance, when trying to finish up my random household survey in October 2003, I could not carry out research in the community during the Hindi festival of Diwali (on the advice of my NGO affiliate), which amounted to a delay of about ten working days. In November 2003, during which I was conducting the purposive surveys in the community, I had difficulty accessing a number of local leaders and members of the different environmental committees. The reason was that these individuals were often away from the community during the day attending political rallies as part of the lead-up to state elections that were held on December 1, 2003. Also, I could not go to the community on national and statutory holidays, of which there are quite a few in India (over 20 days per year), as well as during the Christmas-New Years period, because my NGO affiliate (a Christian organization) was not there at those times.

My lack of Hindi was a barrier in the study community where Hindi was by far the most prevalent language and little English was spoken. Obviously, it would have been preferable to communicate with local residents directly and not filtered through my field assistants. I missed out, no doubt, on the nuances in meaning and depth of understanding that would have been attainable only through fluency in Hindi. Nevertheless, I feel that my field assistants did a good job with facilitating communication between local residents and me, both in the course of the formal survey work and in casual conversations that took place in the community. At the same time, I recognize now that Hindi fluency would have been a big asset, not only to converse with local residents spontaneously, but to be better attuned to my surroundings. Not having recourse to Hindi did make me feel vulnerable at times, especially in a few potentially threatening situations. As far as the macro-level research, though, Hindi was not an issue since I was able to conduct interviews with all of my key informants in English.

Although I used the PLUS Project office as a base in Sultanpuri, I felt that local residents, for the most part, perceived me as an independent researcher, rather than a member of the NGO. To separate myself from Saahasee amongst local residents, for instance, I always introduced myself in interview situations as a researcher from Canada. In this regard, most respondents in the community whom I spoke to were, as mentioned earlier, open and candid and not reluctant to express themselves out of concern that I might be working with, or for, Saahasee. However, notwithstanding that Saahasee was instrumental as my gatekeeper to the research community, the particular relationship I had with them did entail a few limitations. In this regard, I sensed that the PLUS staff tended to maintain a "good front" with me in discussions of the PLUS Project (i.e., acknowledging only the positive dimensions). This reserve, though understandable, presented a challenge to understanding the community objectively. It is possible that staff members thought that I might pass unfavourable information along to the director of the NGO or that I was surreptitiously evaluating them, despite my assurances to the contrary. Apart from that, I encountered some difficulties accessing project reports (to be discussed further below) and a few other problems, mostly related to communication, in my interaction with the NGO (explained in Appendix C).

6.4.2 Problems related to specific research methods

Several of the research methods that I utilized, both in the study community and at the city level, entailed some complications or had an impact on the quantity and quality of data

obtained. One problem had to do with carrying out the random survey on my first trip, which let me to stop short at a pilot survey and having to do the full survey again on my second trip. In my initial survey attempt, I was not satisfied with the data quality obtained. On that trip I utilized four field assistants/translators (two men and two women), arranged for through my NGO affiliate. I utilized the assistants concurrently, rotating which person I accompanied for interviews each day. My motive in utilizing the team of assistants was to attempt to complete the random survey in the limited time I had available towards the end of my first trip. In retrospect, it was not a good strategy. The field assistants had some difficulty administering the questionnaire, mostly due to its length, the use of filters, and the complexity of some of the social capital-related questions. I did not feel confident, either, with the level of consistency attained in using four different translators. Also, my Hindi and their English was limited, so as a group we had difficulty communicating with one another, which otherwise might have improved the data collection. The experience, nevertheless, made me appreciate that it is much better in terms of data consistency to work with just one research assistant if feasible.

On my second trip, I utilized two research assistants/translators (different people from the first trip) whom I interviewed and chose myself. One woman was a bright student from Delhi University and the other woman had a fair amount of experience working in Delhi slums. I had planned to work with one research assistant only during my second trip, but my first assistant developed health problems and I had to hire a second person on a part-time basis. Both women, though, were proficient at interviewing and had good Hindi and English skills. Throughout the second fieldwork phase, I worked with only one field assistant at a time in the field and was physically present for all of the interviews, which I believe resulted in more reliable data collection.

In hindsight, the number of squatter households that I surveyed was probably too few. I should have done at least 30 interviews in the squatter settlement, which I now see as a flaw in the sampling design. At the time, I thought that the 16 squatter households would be a sufficient number as I did not anticipate needing to later disaggregate data for the squatter colony and resettlement area. After I completed the fieldwork and returned to Toronto, however, I realized that a larger sample from the squatter settlement might have been useful for making comparisons between the two different types of settlements.

Two questions in the questionnaire instrument used for the random survey turned out to be rather sensitive for some members of the Sultanpuri community and, accordingly, had to be

handled with care. One such question inquired about trust levels towards others, such as family members, relatives, neighbours, pradhans, local politicians and government officials (a dimension of social capital) (Question #41 from the questionnaire instrument). It was usually the context that mattered – if the respondent was alone, there was generally no problem in responding. Sometimes, though, when family members or neighbours were around, participants were cautious or uncomfortable with the question. Though many respondents, for instance, reported having high levels of trust toward their family members, others, such as a number of wives we talked to who were experiencing marital problems, had a lack of trust. For these women, it was understandably difficult to make this kind of a disclosure in front of their husbands or older children. Similarly, residents were reluctant at times to say something negative about their neighbours when they were standing around or about the pradhan when he was sitting nearby. For other survey participants, it was awkward to say something less than flattering about the local politician who had a reputation as a tough guy with a "goon squad." My basic approach was to assure participants that all interview questions were voluntary and that any and all information would be treated confidentially. Residents were never pressured to respond.

The other sensitive question was the one that asked respondents about their views of various anti-social elements in their community, including theft, vandalism, harassment and physical violence directed against women, fighting among men and boys, alcoholism, and illicit drug activity (Question #46 from the questionnaire instrument). In this question, residents were not asked to give any specific information, only to comment on the extent of the problem (i.e., whether a big problem, small problem, or not a problem). A number of residents were particularly hesitant, if not downright afraid, to say anything about the local drug scene, especially those residing in the more afflicted lanes of the colony. These people were evidently fearful of reprisals. With some participants, we had to make it clear that we did not want to know which houses were involved, nor did we want any names. We also had to emphasize that we wanted to find their opinions about the community in general, not their particular lane. The anxiety that this question caused was not unexpected, given the drug and crime problems in the community.

To minimize any potential harm to respondents associated with asking the above two questions, my field assistants and I used a few strategies that were developed in conjunction with my affiliate NGO. When the interview was taking place in the lane environment, for

instance, we endeavored to sit next to respondents and ask the sensitive questions in a quiet manner so as to not attract undue attention. When a crowd was milling around, we frequently deferred asking these questions till later in the interview when, perhaps, bystanders might have left the area. We tried to be aware, too, about asking delicate questions when young children were around, which they often were. Simple postponement often worked, as children became bored with the interview process and resumed playing. When we sensed that the respondents were in an awkward situation, or ill at ease, we refrained from asking the question entirely, or parts of the question. In a few instances, we had prior knowledge that our interviewees were drug dealers or users themselves, or we knew that some of the bystanders were involved. In these cases, we usually did not ask the question about drugs and crime. On the whole, though, many respondents in the random survey were forthcoming and candid in their answers to the sensitive questions, particularly when they had a measure of privacy, although we did receive quite a few "Refused to answer" responses.

Regarding the three purposive surveys, the environmental committee members survey went well, while the community leaders and local stakeholders interviews had some minor difficulties. In the community leader interviews, I had concerns about the quality or genuineness of some data obtained from the pradhans and local councillor. In several interviews, I was of the opinion that individuals were holding back in their responses to certain questions, putting on a good front, or else exaggerating their leadership efforts and accomplishments in the community. With the stakeholders survey, the main problem I had was the uneven quality of interviews. A few of the sessions were good, with respondents being very open and talkative, while other interviews were less successful, probably owing to various factors. In the interviews with government officials, for example, I felt that several respondents provided glib answers, not wanting to stick their necks out or convey an unfavourable impression of themselves or their departments. Similar to interviews with some of the community residents, moreover, the physical context (i.e., whether co-workers were in the vicinity) seemed to influence the candour of government respondents.

With respect to my document and literature search in Delhi, I was not able to obtain everything that I wanted, partly on account of access restrictions and partly because much of what I was looking for was in short supply or did not exist. For instance, I was able to obtain some but not all of the community-level documentation on the PLUS Project from my NGO affiliate. The organization was reluctant in the early stages to share their internal documents

and reports with me and it was only towards the end of my fieldwork, after repeated requests, when I managed to obtain a portion of it. The PLUS documents I did get a hold of have a lot of useful information, though some are incomplete or undated. As for the macro-level literature search in Delhi, I found that while much has been written about slums and urban poverty in India, as well as the urban environment at a city scale, comparatively little academic work has been done on the environmental aspects of low-income urban settlements. As far as government documents, I did find a number of publications from the various government bodies, but was not able to access reports from key local government departments such as the MCD Slum and JJ Wing, Public Works and the Delhi Jal Board.[11]

[11] For more discussion of difficulties related to specific research methods, see Appendix C.

Chapter Seven: Introduction to Sultanpuri

This chapter introduces the research community and is organized into two parts. The first section describes the physical layout of the settlement, housing, infrastructure and facilities, and local economy. The second section gives a socio-economic profile of residents and discusses several distinctive features of the community, including problems of endemic crime and violence and the presence of a historically persecuted caste group (known as Sikligars), which have a bearing on local social relations.

7.1 Description of Community

The focus of my research is a particular community in Sultanpuri Resettlement Colony, which is located in northwest Delhi. Sultanpuri is one of largest resettlement sites in the city, housing upwards of 100,000 people in approximately 17,000 plots over an area of 342 hectares (Birdi, 1995; MCD, cited in Ali, 1998). The colony was developed during the Emergency (1975-77), the most intense period of resettlement in the city's history, when droves of squatters and slumdwellers were relocated from the central core of Delhi to outlying areas. Many poor households that were resettled in Sultanpuri have since left and been supplanted, to some extent, by higher-income groups. Today, Sultanpuri is generally a low-income or working class area containing a mix of original resettlement families and more recent arrivals.

When the original resettlement population came to Sultanpuri some thirty years ago, the colony was being built beyond the city boundary on agricultural land (Bose, 1995). As a result of the geographic expansion of Delhi over the years, Sultanpuri now falls within the urban limits but is still on the outskirts (see Map 3 in Chapter Five). The location of the settlement has entailed numerous difficulties for inhabitants, including lack of job opportunities, disruption of preexisting social networks, and lengthy commuting distances around the city. Although the first Delhi Master Plan called for integration of resettlement colonies with higher-income communities (Bose, 1995), which would have been beneficial in terms of employment and availability of services, Sultanpuri is surrounded by other resettlement areas such as Mangolpuri and Nangloi. Its location is also substandard from an environmental standpoint. Sultanpuri is in close proximity to main transportation routes, including Rohtak Road and the Northern Railway line, and the Najafgarh industrial area, which are sources of air and noise pollution. The colony is also near to the Nangloi drain, a major stormwater

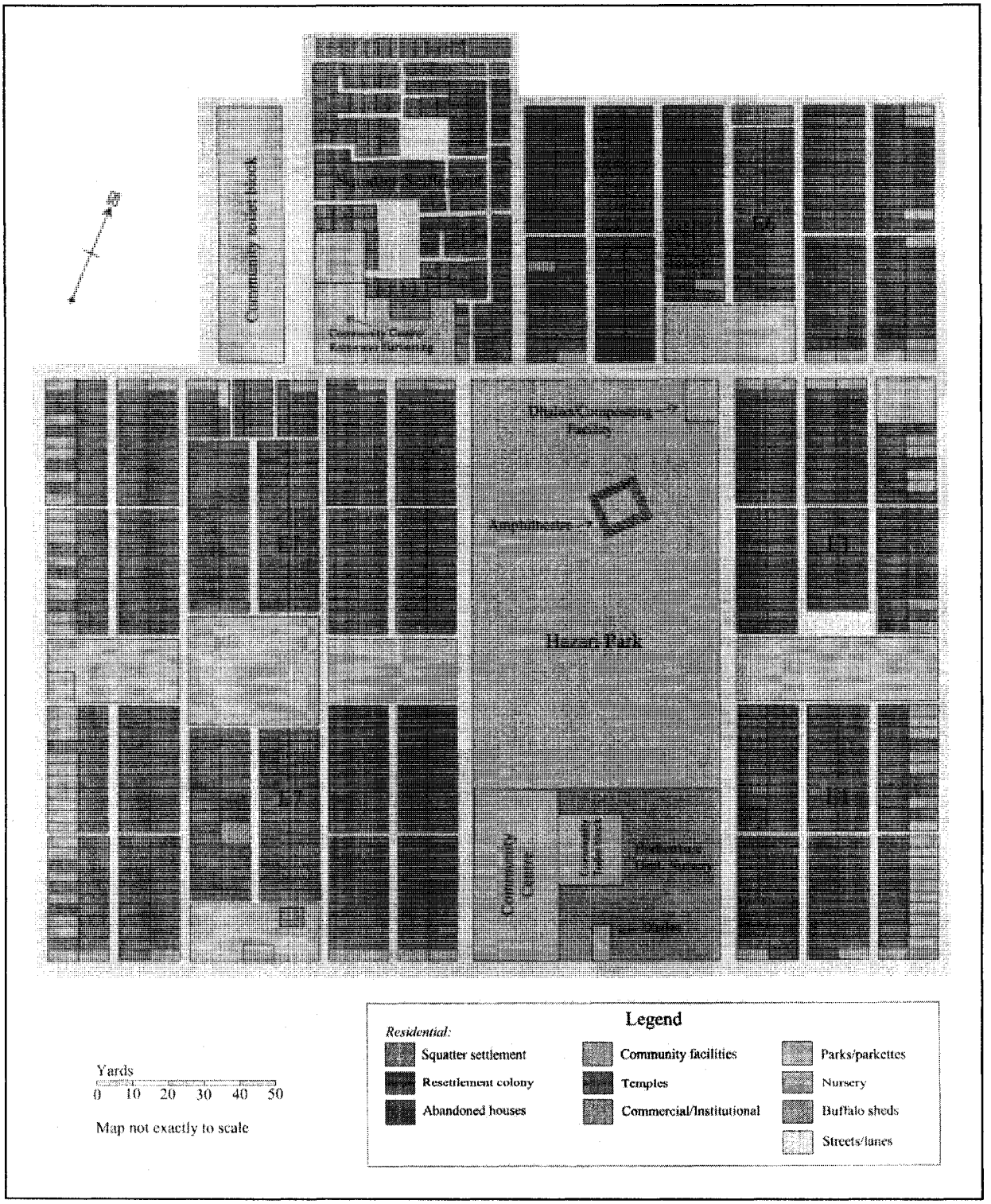
channel that becomes unsanitary when congested or clogged with garbage and poses a flood risk during monsoons.

Like other resettlement sites in Delhi, Sultanpuri is a planned space laid out in a grid pattern of residential blocks, with open areas allocated for community facilities. The colony has nine blocks in total, designated as A, B, C, D, E, F, G, H and P, and each block is further divided into sub-blocks, e.g., A1, A2, A3, etc. The sub-blocks have internal *galis* (lanes about 12 feet wide) separating rows of houses. All plots in Sultanpuri are 25 sq. yd. (21 sq. m.) in size, although a small number of residents have managed to acquire double plots. Plots are rectangular in shape, typically 22.5 feet by 10 feet, with the 10-foot side fronting onto the gali or street. Sultanpuri does not have any tenement housing.

The study community consists of three of the seven sub-blocks in E-block: E1, E6 and E7 (shown in Map 4 below). Each of the sub-blocks is a residential area on a neighbourhood scale with several hundred houses. E1, E6 and E7 are situated on three sides of a small municipal park called Hazari Park, which contains a number of public facilities. Collectively, the three sub-blocks have approximately 1200 households. In addition, within E6 is a squatter settlement of about 160 households. The total number of households in the study community is therefore around 1360. To recapitulate, the 1200 households are in the planned resettlement area of 25 sq. yd plots, and the 160 squatter households are in the unplanned JJ cluster. The study area can be thought of as comprising four small neighbourhoods: the three resettlement area neighbourhoods plus the JJ cluster. I will henceforth utilize "E1," "E6" and "E7" to refer to the three resettlement area neighbourhoods, and the "squatter settlement" or "JJ cluster" to denote the informal colony in E6. The reason that I have defined the study community as such is because this area corresponded to the project site of my NGO affiliate.

In the planned resettlement neighbourhoods of E1, E6 and E7, residents have made substantial investments in their housing over time. Housing consists of small *pucca* (permanent) structures with brick and mortar walls and concrete roofs. Constrained by small plot size, residents have expanded their housing vertically over the years. Most houses in the study community are double-storey, the rest being either one-storey or three-storey. Generally, each storey has two rooms. The two- and three-storey houses are variously occupied by single or multiple households, in the latter case extended families or renters in addition to the owner household. A small percentage of houses, especially in E1, are dilapidated and have been abandoned. The galis between rows of houses are a salient feature of these neighbourhoods,

Map 4. Study Community in Sultanpuri Resettlement Colony, Delhi



serving as an extension of domestic space, a place for economic activities, and a zone of social interaction. Residents in the resettlement area, with the exception of the renters, have fairly secure tenure status and are not likely to be evicted (Kundu, 2004).

The squatter settlement originated around 1978, not long after Sultanpuri was developed, an instance of the "slums within slums" trend in Delhi's resettlement colonies. In contrast to the geometric form of the resettlement neighbourhoods, the squatter colony has an organic layout with densely-packed houses intersected by narrow galis (about 3 to 6 feet wide). Plot size in the squatter area is irregular, with most plots being about one-quarter to one-half the size of the standard 25 sq. yd. properties in the planned blocks. The squatter settlement has a few small open spaces; however, living conditions are more congested than in E1, E6 and E7. Squatter housing is also of lower quality, being *semi-pucca* (semi-permanent) with brick and mud walls and sheet metal roofs. The squatter shelters are one-storey and usually have a single room. Considering that many jhuggis in Delhi are temporary structures, the semi-pucca houses in the JJ cluster are evidence of significant outlays by squatter households.

Shelter consolidation in the JJ cluster is likely indicative of the squatter residents' relative sense of tenure security. Although the settlement is illegal and thus the government could, in theory, demolish it at any time, the squatters nevertheless exhibit some measure of confidence that they will not be evicted in the near future. In Delhi, squatters can have a degree of informal security, depending on factors such as the settlement's location and history, patronage from local leaders and politicians, extension of municipal services, and possession of proof of residence in the city[1] (Kundu, 2002a). The squatters in the study community have probably not been under the same risk of eviction as those who encroached on prime land in central Delhi. The cluster's longevity, moreover, would give squatters partial assurance that they could remain there (Kundu, 2002a). In addition, the squatters in the community have had connections with local politicians and acted as a "vote bank," a common strategy utilized by the urban poor in Delhi to obtain protection from eviction and access to infrastructure and services (WWF-India, 1995; Antony and Maheswaran, 2001; Kundu, 2002a). For these reasons, the squatters in the study area have had a perceived sense of security that has enabled them to make private investments in housing.

[1] Proof of residence in Delhi before a certain date (e.g., voter's identity cards, ration cards and other documents) does not, in itself, provide any insurance against eviction, but increases the possibility that evicted households will be covered under a resettlement scheme.

Although a residential area, the study community has a local economy that is primarily service-oriented. Shops on the main streets of E1, E6 and E7 sell merchandise such as household wares, fruits and vegetables, sweets, clothing and music cassettes. In the same locale are tea stalls, barbershops, beauty salons, telephone stands, repair shops, astrologers, accountants and other businesses. Home-based enterprises are found throughout the community, carried out within the confines of houses or in the galis. Such activities include vending, food production for sale, sewing, tailoring, ironing clothes, carpentry, furniture-making, blacksmithing and piece-work (e.g., making *bindis*[2] and packaging matchsticks). In the galis as well, hawkers sell various goods from trolleys and handcarts. The community also has a dairy consisting of black buffaloes and cows. The animals, which are kept in sheds in E6 and several houses in E7, are allowed to roam the community.

Social infrastructure is found in the planned neighbourhoods, but not in the squatter settlement. The community has a number of Hindu and Sikh temples. Educational facilities include government schools up to the secondary level (class 10), private schools and day care centres for preschool children. Two *basti vikas kendras* (community centres) are located in E6 near the squatter settlement and at the south end of Hazari Park. Health facilities consist of small clinics, dispensaries and private medical practitioners. A government program, the Integrated Child Development Scheme[3] (ICDS), operates out of one of the community centres and targets children 0-5 years and mothers in the areas of health and nutrition. Two NGOs work in the community: Saahasee, the organization that I was affiliated with; and Sewa Bharati, a group that provides vocational training, day care programs and a health clinic. As the community has a high incidence of tuberculosis, HIV/Aids and drug abuse, Saahasee runs a number of programs in these areas. Saahasee also organizes women in the community into thrift and credit groups.

Environmental facilities are primarily at the community-level, although some households in the resettlement neighbourhoods have municipal water connections and private toilets. Shared infrastructure includes public standpipes, handpumps, a rainwater harvesting structure, open drains, a garbage collection point, composting facilities, a community toilet block and

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[2] A bindi is a holy mark worn on the forehead by married Hindu women, traditionally in the form of a red dot made with vermillion, which is believed to protect women and their husbands. In contemporary India, however, bindis have become a decorative item that is worn by girls, unmarried women and non-Hindus also. Commercially-produced bindis are made from felt and self-adhesives and available in an array of colours, shapes and patterns.

[3] ICDS is under the Department of Social Welfare of the Delhi Government

several small parks (see Map 4). Residents of the resettlement neighbourhoods as well as the squatters utilize the communal facilities. In Chapter Eight, environmental infrastructure and services in the study area will be discussed in more depth, along with utilization of facilities and local environmental conditions.

7.2 Socio-Economic Profile

A summary of the community's socio-economic characteristics is provided in Table 7.1 below, based on data from the random survey of 114 households that I carried out as part of my fieldwork research in Delhi in 2003-04. Survey respondents were approximately two-thirds women and one-third men (65.8 % and 34.2 %, respectively). The study area is predominantly Hindu (81.6 % of households), with a minority Sikh community (18.4 % of households). Over two-thirds of survey respondents (68.4 %) are first-generation rural-to-urban migrants hailing from Uttar Pradesh, Rajasthan, other north Indian states and Pakistan. The remaining 31.6 % of respondents were born in Delhi. Of the respondents who are migrants to Delhi, the average length of time in the city is 23.3 years and thus most are not recent arrivals. Among all respondents, the average length of time residing in the community is 17.8 years. Consistent with the literature on Delhi's resettlement colonies, residential turnover has been high in the study area. About 40 % of households in E1, E6 and E7 are original allottees who were resettled in Sultanpuri between 1975 and 1977. The other 60 % of households have arrived post-1977 as plots and houses changed hands over the years.

In terms of broad caste composition, the community is made up of 49.1 % Scheduled Castes (SCs), 13.2 % Other Backward Castes (OBCs) and 32.5 % General Castes.[4] For a small percentage of households (5.3 %), the caste could not be categorized for various reasons.[5] As is common in Delhi's resettlement colonies, the study community has a high proportion of SC households relative to the Delhi population (16.9 % SC) and the national population (16.2 % SC) (Census of India, 2001). At the same time, though, the community contains a significant percentage from the General or higher castes (almost one-third of households). Within the categories of SCs, OBCs and General Castes, survey respondents represented some 35 different individual castes.

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[4] For information on the Indian Caste system, see Appendix C.

[5] For a few households, the caste could not be categorized mainly because respondents did not know their caste or else provided Indian surnames that are common to multiple castes.

Table 7.1. Summary Characteristics of Respondents in Study Community

Total number of respondents	114
Percentage male	34.2
Percentage female	65.8
House location	
Percentage residing in resettlement neighbourhoods (E1, E6 and E7)	86.0
Percentage residing in squatter settlement	14.0
Relationship to Head of Household (HoH)	
Percentage HoH	33.3
Percentage spouse	50.0
Percentage son, daughter or daughter-in-law	15.7
Percentage other	0.9
Average age of respondents	37.3 years
Religion	
Percentage Hindu	81.6
Percentage Sikh	18.4
Caste affiliation	
Percentage Scheduled Castes (SC)	49.1
Percentage Other Backward Castes (OBC)	13.2
Percentage General Castes	32.5
Percentage Don't Know/Nonclassified	5.3
Mother tongue	
Percentage Hindi	93.0
Percentage Punjabi	5.3
Percentage Rajasthani	1.8
Education level of respondents	
Percentage having no formal education	60.5
Average number of years of education - all respondents	3.7 years
Average number of years of education - female respondents	2.6 years
Average number of years of education - male respondents	5.8 years
Household size and composition	
Average household size	6.3 persons
Percentage nuclear families	54.4
Percentage extended families	37.7
Percentage single-parent families	5.3
Other household type	2.6
Occupancy status	
Percentage owning home	85.1
Percentage renting	11.4
Percentage other arrangement	3.5
Number of rooms in home	
Average for entire community (squatter and resettlement areas combined)	3.1 rooms
Average for squatter settlement only	1.1 rooms
Average for resettlement neighbourhoods only	3.4 rooms
Occupation of HoH	
Percentage petty trading and vending	22.8
Percentage transport	8.8
Percentage services	18.4
Percentage manufacturing/construction/daily labourer	32.5
Percentage professional	1.8
Percentage other/unemployed/retired	14.9

Birthplace of respondents	
Percentage in Delhi	31.6
Percentage in Uttar Pradesh	35.1
Percentage in Rajasthan	20.2
Percentage in Haryana	6.1
Percentage in other Indian states or Pakistan	7.0
Number of years residing in Delhi	
Average for all respondents	26.4 years
Average for all respondents not born in Delhi (migrants)	23.3 years
Number of years residing in community	
Average for all respondents	17.8 years
Percentage of original resettlement households in E1, E6 and E7	39.8
Household food expenditures (per capita per day)	
Average for all households in study community	17.1 rupees (Can $0.57)
25th percentile	10.8 rupees
50th percentile	15.8 rupees
75th percentile	20.0 rupees
100th percentile	50.0 rupees
Household assets	
Percentage owning a television	86.8
Perdentage owning a radio/stereo/cassette tape player	36.8
Percentage owing an air cooler	65.8
Percentage owning a refrigerator	49.1
Percentage owning a bicycle	46.5
Percentage owning a scooter/motorcycle	21.9

Average household size in the study community is 6.3 persons, which is substantially higher than the Delhi and India figures of 5.1 and 5.3 persons, respectively (Census of India, 2001). Large household size can be a contributing factor in household poverty, especially where the ratio of workers to dependents is low. The most common household structure is nuclear families (54.4 %), followed by extended families (37.7 %), single-parent families (5.3 %) and other types (2.6 %). Heads of households (HoH) are male in 88.6 % of households and female in the other 11.4 % of households. Usually, the household head is the eldest adult male family member. In the case of extended families, a common pattern is for the married son to continue to live with his parents and thus the household expands with the addition of the son's wife and their children.

Education levels in the community are fairly low overall, with 60.5 % of respondents having no formal education. The average number of years of education for all respondents is 3.7 years. Female respondents have a mean of 2.6 years of schooling and male respondents a mean of 5.8 years, a difference that is statistically significant at $p = 0.05$.[6] Consequently,

[6] The probability level of $p = 0.05$ will be used throughout the thesis in a number of statistical tests.

literacy levels in the community are not high, especially among females. The lower education level of females is not surprising given that, in Indian society, girls and women usually have less access to education than males. Some members of the community, however, have a higher level of educational attainment. Among all respondents, 16.7 % have completed up to primary level (Class 5), 5.3 % have studied up to secondary level (Class 10), 5.3 % have senior secondary (Class 12), and another 8.8 % have post-secondary education or university degrees.

Employment data reveals that household heads are primarily engaged in the informal tertiary sector. Activities include vending and petty trading (shopkeeper, hawker, fruit seller, tea stall), transport (rickshaw puller, autorickshaw driver, truck driver), services (watchman, tailor, day care worker, motor mechanic, knife sharpener, street sweeper, clothes ironing, horoscopes, *kabariwallah*,[7] private tutor), manufacturing/construction (factory worker, fitter, dye maker, blacksmith, metal work, carpenter) and daily labourers (no specific activity). A very small percentage of HoH's (1.8 %) have a professional occupation (chartered accountant, teacher). Most workers are not performing traditional caste-based occupations, with the exception of members of the *Dbobi* caste (washing and ironing clothes) and the *Sikligar* caste (blacksmithing and lock-making). Although data were not systematically collected about workplace location, from my visual observation of the community much of the activity is home-based, especially in the vending and petty trading, service, and manufacturing sectors.

The household survey did not inquire directly about household income; however, several types of data obtained point to income differentials in the study area. Household assets, including housing and other material possessions, can be viewed as a basis for ascertaining different levels of economic well-being (e.g., Srinivasan and Mohanty, 2004; Bajpal and Bhandari, 2001). In the community, the most obvious variation in income status is between the squatters and residents of the resettlement neighbourhoods, as manifest in housing quality. As noted earlier, the squatter dwellings are semi-permanent structures, whereas housing construction in the resettlement neighbourhoods is permanent. Squatter houses are also much smaller, having an average of 1.1 rooms, as opposed to 3.4 rooms in resettlement area houses, a statistically significant difference. The squatters, moreover, live in more cramped conditions, an average of 5.4 persons per room as against 2.1 persons per room in the resettlement neighbourhoods, again a statistically significant difference.

[7] A person who collects recyclable materials door-to-door for resale (e.g., paper, glass bottles, metal cans, plastic).

In the household survey, respondents were asked whether their households owned any of the following six types of durable goods: a television, radio/stereo/ cassette player, air cooler, refrigerator, bicycle and scooter/motorcycle. Survey data showed that squatter households tend to have fewer durable goods than the resettlement neighbourhood households. The mean number of durable goods in squatter households is 2.4 as compared to 3.2 in resettlement area households, which is also a statistically significant difference. Such economic differences between the two types of neighbourhoods are not surprising, in that average household income in the squatter settlement would, very likely, be less than in the resettlement area.

For a couple of reasons, I was not able to identify households in the study community as being above or below the official poverty line. First of all, the most recent estimate of the poverty threshold for Indian cities, which is a food expenditure of Rs. 451.2 per capita per month (Rs. 15.0 per capita per day) based on 1999-2000 consumer expenditures (Sundaram, 2001), is somewhat dated for the survey I undertook in 2003. Secondly, although I collected data on household food expenditures, I did not obtain sufficient information about all household members to be able to replicate the official methodology, which uses weightings for gender and age categories relative to a "consumer unit" of 1 (a male in the age category 20 to 39) (Kumar and Aggarwal, 2003). Regardless, I would argue that the official poverty line for urban India has inherent limitations because, as discussed earlier, the cut-off is set too low to begin with, does not factor in the higher costs of living in Delhi, and does not account for non-economic dimensions such as access to basic services.

The data I collected on food expenditures are nonetheless useful in gauging the relative economic status of households in the study community. Food expenditures are a good proxy for income data since food is the largest expenditure category of the urban poor in India, representing 70 % or more of monthly household income (Kumar and Aggarwal, 2003; Sharma, 2002; Kundu, 1996). In the community, the average daily per capita food expenditure is Rs. 17.1, which is slightly higher than the official poverty threshold of Rs. 15.0. The distribution of household food expenditures in the community, as shown in Table 7.1, shows that the highest quartile (Rs. 20.0 and above) is spending about double or more on food relative to the lowest quartile (Rs. 10.8 and below). Given the importance of the food category in household budgets, I contend that the variability in food expenditures is indicative of income differentials within the community. Of the six types of durable goods as listed above, the average number of household assets for the entire study area is 3.05. Though not shown in

Table 7.1, the lowest quartile in the community has two or fewer assets, while the highest quartile has four or more. Similar to food expenditures, the number of household assets is variable across the community as a whole, which is further indication of income differentials.

According to the literature, economic inequality has increased in Delhi's resettlement colonies over the years as higher-income groups have displaced the original low-income households (Ali, 1998; Kundu, 2002a; 2004). The survey data on housing, food expenditures and household assets, collectively, suggest that the study area is not uniformly poor, which is in accord with the city-wide trend. The survey results suggest that some households have multiple deprivations (e.g., lack of living space, inadequate nutrition, menial employment or unemployment, low education levels, lack of material assets), while others are less deprived and have a better standard of living.

One way to differentiate the community economically is to use the community means for food expenditures and household assets as the dividing line between two groups, which I will term the "poor" and the "relative poor." Accordingly, the poor are roughly synonymous with the households spending below Rs. 17.1 on food, which corresponds to 62.3 % of households in the study area. Similarly, the poor could also be identified as those households having three or fewer durable goods, which is 59.6 % of households in the community. The relative poor, then, are the other 40 % or so of households that have the capacity to spend more than the community average on food or the resources to acquire a larger number of household possessions.

Although I cannot pinpoint the poverty line in economic terms, in my estimation the community has a substantial proportion of households below and above that threshold. In the poor group, I believe that the majority of households would be below or at the government poverty line, if it were adjusted to reflect 2003 prices and increased costs of living in Delhi. In the relative poor group, households would probably be a mix of those marginally above, and well above, the poverty line. Interestingly, income differential in the study community does not appear to be caste-based, as might be supposed. SC households are spending less on food than higher caste households (non-SC households), that is, Rs. 15.9 compared to Rs. 18.4 (per capita per day), but the difference is not statistically significant. Furthermore, SC households have fewer household goods than the higher caste households, 3.0 as against 3.1, yet again the difference is not statistically significant.

In defining two economic groups in the study community as the "poor" and the "relative poor," I am proposing that income differential is a salient feature of the study community. I will refer to the two groups as part of the analysis and discussion in subsequent chapters. Economic inequality, however, is only one aspect of diversity in the study area. Other important axes of difference in the community are caste affiliation, place of origin, mother tongue, religion, duration of residence in the community, educational attainment and gender. Overall, the study community would have to be characterized as heterogeneous, which is not uncommon in Delhi, but is especially true of Sultanpuri and other resettlement colonies in the city because of their genesis as "melting pots" and subsequent transformation over the years.

To round out the picture of the community, another important dynamic is local crime and violence. Sultanpuri is a crime-afflicted area, ranking number one in Delhi based on number of cases registered at police stations in 2003 (Hindustan, 2003c). Sultanpuri, moreover, has a reputation for violent crimes such as murder, assaults, armed robbery and rape (Das, 1996; Hindustan, 2003c). The community has a well-entrenched drug culture and much of the local crime is drug-related. The situation in Sultanpuri is, of course, part of the broader context of increasing crime rates in Delhi and across the country (VHAI, 1993; Mukherjee at al, 2001). According to National Crime Records Bureau, Delhi had the highest number of Indian Penal Code crimes[8] among the country's 35 million-plus cities in 2003; on a per capita basis, though, Delhi was 15th highest (NCRB, 2004).

I will now highlight one specific caste represented in the community, as they will be referred to in later chapters. The Sikligars are the largest caste group in the community, representing about 20 % of all households, and notified as a Scheduled Caste in Delhi. Although the caste group has followers of both Sikhism and Hinduism (Singh, 1996), those residing in the study area are predominantly Sikh. The majority of Sikligars in the community are related by kinship bonds and their houses are concentrated in several lanes in E6, the rest being dispersed in E7 and the JJ cluster. They are an occupational caste, with most of the men engaged in blacksmithing and lock-making (Singh, 1996). Literacy rates are low in these families and most would fall into the poor group. Although they constitute the largest ethnic group in the study area, the Sikligars are a very small caste at the city level, numbering in the

[8] Major categories under the Indian Penal Code (IPC) include crimes against body, crimes against property, crimes against public order, economic crimes, crimes against women, and crimes against children. Other types of crimes fall outside the IPC and are covered under Special and Local Laws, which relate to transgressions pertaining to various pieces of legislation (NCRB, 2004).

tens of thousands. Sikhs of all backgrounds, including the Sikh Sikligars, are a minority community in Delhi comprising 4.0 % of the total population (Census of India, 2001).

Many of the Sikligar families in the study area migrated from the Punjab following Partition, settling in Rajasthan before coming to Delhi. As the Punjab was the epi-centre of massive sectarian violence[9] that took place leading up to and following Partition, the Sikligars have a history of being persecuted. After the assassination of then-Prime Minister Indira Gandhi by two of her Sikh bodyguards on October 31, 1984, Sikhs suffered greatly from a second episode of communal violence that erupted in India (Das, 1996). In Delhi, roaming mobs, goons and the police killed more than 4,000 Sikhs in different areas of the city, a carnage that many believe was systematically planned by high-ranking Hindu political leaders of the day (Anil, 2004).[10]

Sultanpuri Resettlement Colony was a flashpoint in the 1984 massacre. The exact number of Sikhs killed in the area is unclear, but a partial survey carried out in the aftermath recorded 119 deaths, most them Sikligars from A-block, F-block and P-block. No deaths were reported in E-block, where the study community is located (Das, 1996). Some neighbourhoods were able to defend themselves by erecting barricades, mustering any weapons they had, and posting sentries (Das, 1996). Most of the brutality was directed at males who were pulled from their homes and beaten or burnt alive. In a number of cases, men had their lives spared but were shorn of their hair and beards to humiliate them. The perpetrators were local people (one Hindu caste in particular), some outsiders, the police, and henchmen connected with the area Member of Parliament (Das, 1996). As happened elsewhere in Delhi, however, amidst the brutality that took place, some Hindus and members of other communities in Sultanpuri came to the aid of Sikhs and hid them in their own homes, at great peril to themselves (Das, 1996; Anil, 2004).

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[9] The Punjab was the Indian province prior to Independence that the British carved up under Partition into Hindu- and Muslim-dominated areas, with the former remaining within the Indian republic and the latter becoming part of the newly-created nation state of Pakistan. The land occupied by the Sikh minority community in the Punjab was essentially divided into two to placate the Hindus and Muslims and thus the Sikhs lost out, moreso than the other communities (Metcalf and Metcalf, 2002). The violence that occurred among Hindus, Muslims and Sikhs prior to, and following, Partition in 1947 was on the scale of a holocaust, with estimates of those killed ranging from several thousand to one million (Metcalf and Metcalf, 2002).

[10] Since 1984, many public commissions have been held in India over the Sikh massacre, yet to this day very few of the guilty parties have been brought to justice (Anil, 2004; Das, 1996).

One theory about the Sultanpuri violence is that it was not so much fueled by nationalist sentiment over Ghandi's assassination but, rather, was the spillover of an ongoing power struggle between the *pradhan* (local leader) of the aforementioned Hindu caste and the pradhan of the Sikligar caste (Das, 1996). While the study community was spared the brunt of violence that descended on their neighbours, the tragic events would no doubt be indelibly etched in the memories of the Sikligars and others who lived there at that time.

Chapter Eight: Environmental Conditions in Sultanpuri

This chapter documents environmental conditions in Sultanpuri and concerns research question #1. The issues of water supply, sanitation, solid waste management, and parks and open spaces are examined in turn. The description is mainly based on the random household survey and purposive surveys of environmental committee members, local leaders in the community, and external stakeholders. I also utilize personal visual observations from my time spent in Sultanpuri. For each sector, discussion covers local infrastructure and domestic facilities, household practices and difficulties, utilization of infrastructure or services and costs, and related community issues.

8.1 Water Supply

8.1.1 Description of community infrastructure, household facilities and services

Sultanpuri receives municipal water from the Delhi Jal Board (Water Board) (DJB), although access is limited, supply is unreliable, and water pressure is low. Supply is quite intermittent, being available to most households in the study area only once per day.[1] In the resettlement area, the water usually comes in the early afternoon (around 2 PM) and the duration on any given day is from 15 minutes to about one hour.[2] In the random survey, numerous respondents commented that current access was not sufficient for their needs.[3] Moreover, timing of the daily water supply, which necessitates that a family member (usually the wife, daughter-in-law or daughter) remains in the house during the day, was also seen as inconvenient.[4] Community members felt that morning supply would be better.[5] Furthermore, Sultanpuri residents reported that supply is irregular, especially in summer, when no water is available for two to three days at a stretch.[6] During these situations, the DJB or local politicians endeavor to provide water via tankers to Sultanpuri and other affected communities.[7]

Based on the random survey results of the entire study area, 83% of households have private connections to municipal water. For the purpose of my survey, "private water

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[1] Random survey interviews #27, 29, 33, 35, 47, 48 and 74; Pradhan interview #5
[2] Committee member interview #1; Random survey interviews #3, 21 and 27; Pradhan interview #10; Sider, 2003a
[3] Random survey interviews #3, 28, 29, 33, 60 and 74
[4] Random survey interviews #33 and 74
[5] Random survey interviews #33 and 74; Pradhan interview #5
[6] Random survey interviews #27, 53, 60, 62, 77, 88, 89, 91 and 92; Committee member interview #41; Pradhan interview #9
[7] Saahasee, 2003b; Random survey interview #89

connections" means exclusive or shared use (i.e., with one or more households) of a hydrant on the residential plot where the household resides. The figure of 83% reflects that most households in the larger resettlement area have individual connections, whereas no households in the smaller squatter settlement have private connections.[8] When the government developed the resettlement area in the late 1970s, one hydrant was provided per plot as part of the basic amenities for inhabitants (Saahasee, 2003a).

The reason that some households in the resettlement area today have joint use of a private water connection is that, over the years as second and third stories were added on a portion of plots in the area, multiple households have occupied some of those plots (Saahasee, 2003b). An example of this would be a landlord household occupying the ground floor and a tenant household living on an upper floor, both sharing the single hydrant on the plot. While the majority of households in the resettlement area have access to a water connection on their plot, a few do not because the hydrant is no longer functional. In these cases, households obtain water from neighbours.[9]

Dwellings in the resettlement area have a hydrant (pipe) usually located outside near the door, at a height of one to two feet above ground (Sider, 2003a) (Fig. 1 – Photographs included in Appendix C). Of those households having private water connections (83 % of the community), some 72 % have on/off taps and 85% have electricity-driven water pumps. Pumps are needed because of the low municipal water pressure in the area, without which it is difficult to obtain water.[10] Even with pumps, daily power outages in the community frequently prevented local residents from drawing water.[11] Moreover, because pipes were laid at shallow depth (0.7 to 0.8 metres below grade) in close proximity to open drains in the community, water supply is vulnerable to cross-contamination, especially during the rainy months (July to September) (Gurnani, 2003; Saahasee, 2003b).

In the squatter settlement, where no households have private water connections, municipal water supply is provided by means of four public standposts spaced throughout the colony (Sider, 2003a) (Fig. 2). Since each standpost has two taps, this translates into one tap per 19 households in the squatter area. Similar to the resettlement area, water supply is

[8] Saahasee, 2003a; Committee member interview #1
[9] Random survey interviews #51 and 58
[10] Saahasee, 2003b; Committee member interview #1; Random survey interview #31
[11] Saahasee, 2003b; Committee member interview #1; Pradhan interview #5

available once per day (around 4 PM) and usually lasts for a period of about one hour.[12] In contrast to the resettlement area, however, the duration of supply in the squatter colony is controlled not by the DJB but by a community-based water committee that physically turns the flow on and off each day (to be described later in Chapter Ten which focuses on collective action in the community).[13] The standposts, which were constructed in 2001 as a community-NGO-government initiative under the PLUS Project, represent a major infrastructure upgrade for the squatters, since previously the colony had no municipal water supply.[14] Nevertheless, squatter residents periodically experience water shortages, especially in summer months, when municipal water levels are low.[15]

From the results of the random household survey, residents in the study area consider municipal water to be of fairly good quality overall. In response to a survey question that inquired about the quality of water they receive, 77.2 % of respondents gave it a rating of very good or good, while 4.4 % said that it was fair, and 17.6 % considered it poor or very poor. A number of residents did remark about water being muddy or dirty at times, particularly in the rainy season,[16] and others commented that it was yellowish or whitish in appearance or tasted salty at times.[17] One respondent said that "Most of the time the water is not clean,"[18] while another went so far to say that the "Drinking water may be poison".[19]

Besides the municipal water system, residents in both the resettlement area and squatter colony use public handpumps for obtaining groundwater[20] (Fig. 3). No households in the community had private handpumps or wells.[21] The study area has a total of 20 public handpumps, of which 6 are functional and 14 are broken (Sider, 2003b). It was common knowledge in the community that shallow groundwater in Delhi is not safe for potable use and residents used it mainly for non-potable purposes.[22] In general, Sultanpuri households rely on municipal water for potable and non-potable water needs, tending to use groundwater from

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[12] Committee member interviews #1 and 6; Sider, 2003a
[13] Saahasee, 2003a; Committee member interview #1
[14] Committee member interviews #1 and 2; Saahasee
[15] Committee member interviews #1, 10 and 11
[16] Random survey interviews #3, 14, 20, 32, 45, 60, 89; Committee member interviews #1, 9, 10 and 15; Pradhan interview #10
[17] Random survey interviews #25, 50 and 86; Pradhan interview #10
[18] Random survey interview #56
[19] Random survey interview #25
[20] Committee member interview #1; Saahasee, 2003a
[21] Saahasee, 2003a; Committee member interview #1
[22] Committee member interview #1; Saahasee, 2003a

handpumps as a back-up for non-potable uses.[23] Because of limited municipal supply, however, households with larger numbers of occupants were more dependent on groundwater sources. Also, when power outages ruled out use of household pumps and during extended periods of non-availability of municipal water, households were more reliant on groundwater and a number resorted to using it for potable use.[24]

The community also has a rainwater harvesting structure at its community centre (shown on the site map next to the squatter settlement), which was also constructed in 2001 as part of the PLUS Project (Saahasee, 2003a). Indian NGOs, in particular the Centre for Science and Environment (CSE), as well as the Government of India, have been promoting rainwater harvesting in Delhi for a number of years as a solution to the city's depleted groundwater levels (CSE, 2000b; CGWB, 2003); however, projects in low-income areas like Sultanpuri are a rarity (Saahasee, 2003a). The rainwater harvesting structure in Sultanpuri collects rainwater from the rooftop and surrounding pavements of the community centre (approximately 400 square metres), which infiltrates into a bore-well on the property and replenishes local groundwater (Saahasee, 2003a) (Fig. 4). Though the Sultanpuri facility has a certain demonstration value, the project designer from the Central Ground Water Board informed me that it is too small to have an impact on local groundwater levels (Gupta, B. K., 2003). The same official explained that the CGWB had considered a larger-scale rainwater harvesting scheme in Sultanpuri, utilizing the residential neighbourhoods, but decided against the idea on account of the generally unsanitary conditions and congestion in the area, which posed a risk of groundwater contamination (Gupta, B. K., 2003).

8.1.2 Household practices and problems

Water is predominantly used in the study community for domestic needs such as drinking water, cooking, bathing, clothes washing and house cleaning.[25] In a small proportion of households, water is also used for commercial-light manufacturing purposes in home-based businesses such as baking, tea stalls, metal work and other enterprises.[26] In several households, water is used for rearing and maintaining a resident herd of black buffalo (an estimated 20 animals in the area) (Sider, 2003b). In the resettlement area, households with individual

[23] Committee member interview #1; Pradhan interview # 7
[24] Random survey interviews #27, 77, 88 and 89; Committee member interview #1 and 11
[25] Sider, 2003b; Committee member interview #1
[26] Sider, 2003b; Committee member interview #1

connections primarily utilize the 15-minute to 1-hour flow of municipal water to fill their stock of water containers and, time permitting, may carry out other activities at the tap, such as washing dishes and clothes, bathing children, or cleaning the area in front of their houses (Sider, 2003b). In the squatter colony, residents utilize the one-hour period of water availability to take turns filling their water vessels, but do not engage in the variety of water-related chores at the tap as in the resettlement area.[27] The squatters have formulated a set of rules governing use of the public taps, as part of their community management system, with restrictions on bathing and dish-washing at the tap (to be discussed in more detail in Chapter Ten).

Residents in the study community utilize various containers and tanks to store water, ranging from clay pots, plastic bowls and jugs, metal buckets and drums, Sintex tanks,[28] and permanent, above-ground, concrete water tanks (Sider, 2003b). Based on my visual observations in the community, most households have a half-dozen or more small-size vessels, typically 5 to 50 litres in capacity, to collect and store water for their daily needs (Sider, 2003b). The poorer spectrum of households, however, has a lack of vessels for collecting water (only two or three small containers per family), which limits their storage capacity and, consequently, consumption.[29] In the more affluent households in the resettlement area (but none in the squatter colony), Sintex tanks and permanent tanks afford much better water storage capacity, in the order of 500 to 1000 litres.[30]

Since most households in the resettlement area have individual connections, transport of water usually involves short distances from the hydrant outside the door to the dwelling interior and is therefore not overly time-consuming (Sider, 2003b). In multi-storey dwellings in the resettlement area, where water has to be carried up one, and sometimes, two stories, water transport is energy-intensive, however. For resettlement area households that are more dependent on groundwater, use of community handpumps involves carrying water to their houses over distances up to 80 metres (Sider, 2003b). In the squatter settlement, residents transport water from the public taps and handpumps over distances up to 40 metres (Sider, 2003b).

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[27] Committee member interview #1; Sider, 2003b

[28] Polyethylene water storage tanks, cylindrical in shape and covered, usually of capacities ranging from 300 litres to 1000 litres in the study community

[29] Sider, 2003b; Random survey interviews #22, 52, 68, 99; Committee member interview #1

[30] Random survey interviews #64 and 80; Sider, 2003b; Committee member interview #1

According to the random survey results, Sultanpuri residents have a high level of understanding of the health impacts of water they consume. In response to a question that probed whether they had awareness of the link between water quality and their health, an impressive 94% of the community answered in the affirmative. In addition, many respondents were able to cite examples of water-related diseases such as diarrhoea, hepatitis, typhoid and cholera. Nonetheless, water treatment in the home is not widely practiced in Sultanpuri. Households avoid using water that is obviously dirty or muddy in appearance[31] or heed periodic boil water advisories issued by the DJB,[32] but few treat water on a regular basis. When survey participants were asked whether they purify their water, 85.1 % responded that they never treated their water by any method. The proportion of households that treated their water all the time was 8.8 %, whereas 6.1 % said that they purified their water sometimes. The water treatment methods used are filters (in 6.1 % of households), boiling (5.3 % of households), and chlorine tablets (3.5 % of households).

Households not treating water were asked in the survey why they did not, with the most prevalent responses being the belief that the water is already clean/safe (41 %) and the cost of boiling/water filters (34 %). Less common reasons were lack of time (16 %) and dislike of the taste of boiled/filtered water (6 %). That the most common response was the perception that the water is clean/safe is consistent with the generally positive view residents have of municipal water quality although, for about one-third of households, cost of purification is a constraint. A couple of respondents commented that the government used to provide free chlorine tablets in Sultanpuri, but no longer does.[33] Several survey participants made remarks to the effect that they did not purify water because the practice was out of the norm in their community. Some of these comments included, for instance, "Nobody does it [purify water] – Why should I do it?" and "Everybody drinks [untreated water] like that."[34]

In Sultanpuri, water-related tasks around the home appear to be gendered, with little permeability around traditional gender roles. In the study community, women have principal responsibility for obtaining and managing water in the home, with girls having a supportive role. Data from the random survey shows that women and girls combined obtain the household water supply 93 % of the time. In 2.6 % of households, responsibility is shared between

[31] Random survey interviews #14, 20, 32 and 89
[32] Random survey interviews #2 and 3
[33] Random survey interview #22; Committee member interview #9
[34] Committee member interviews #8 and 21

husbands and wives, and in the remaining 4.4 % of households, men obtain the water. In the small number of cases where men are procuring the water, they are compelled to do so because their households have no women or girl members.

Women are the largest single group of water-providers, being responsible for obtaining water in 80.7 % of households. The breakdown for the category of women includes wives of heads of households who obtain water in 50% of households, daughters-in-law who have the responsibility in 20.2 % of households, women heads of households who perform this function in 7.9 % of households, and other female adults who carry out this task in 2.6% of households. The phenomenon of daughters-in-law having a major role in domestic work is customary in Indian society.[35] The contribution of girls is also significant, as they obtain water in another 12.3 % of households. No households reported that boys obtained water. On the whole, allocation of water-related work along gender lines follows a clear pattern; as one woman respondent remarked, it is the woman's duty to do the household work, even when sick, to ensure the survival of the family.[36]

8.1.3 Water consumption and cost

Average daily water use in Sultanpuri is 286 litres per household, or 47 litres per person, estimated from a simple average of summer and winter consumption data collected in the random household survey.[37] Within the study community, though, water consumption is highly variable, ranging from a household low of 25 litres per day to a high of 1000 litres per day. In per capita terms, average consumption ranges from a low of 6.4 litres per day to a high of 187.5 litres per day. Compared to the Delhi average per capita consumption of 250 litres per day (Zerah, 2000),[38] the Sultanpuri figure is about one-fifth. My estimate of 47 litres per capita per day is consistent with the literature on water consumption in low-income settlements in Delhi (Zerah, 2000; Rohilla et al., 1999; GOI and GNCTD, 2001). As would be expected,

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[35] As is common in India, the married son in Sultanpuri often continues residing with his parents and his wife (daughter-in-law to the head of household) thereafter assumes much of the domestic work formerly done by the son's mother or sisters.

[36] Random survey interview #4

[37] Data for winter and summer household water consumption was either self-reported (in instances where survey respondents knew how much water their household used each day) or else estimated by my field assistant and I on the basis of visual observation of households' water vessels (in cases where respondents did not know the daily quantity of water used).

[38] As Zerah (2000) notes, the Delhi average water consumption figure of 250 litres per person per day is very likely an overestimate, as this is an official figure obtained by dividing total water production of the Delhi Jal Board by the number of city inhabitants and does not reflect distribution losses. With a distribution loss of 30 %, however, average per capita figure for Delhi would be around 173 litres (Zerah, 2000).

water consumption in the study community is higher in summer than winter. Average household consumption in winter for the study community was 251 litres per day, or 41 litres per person per day. The same figures for summer were 321 litres per household per day and 53 litres per person per day, or about 22 % higher. The reason that water use tends to be higher in summer is because of more frequent bathing and extra clothes washing.[39]

For the entire study area, 88.6% of households are making a direct payment for their water, either as a utility bill to the Delhi Jal Board (for households with individual connections in the resettlement area) or else as a contribution to the collective water bill to the DJB (for squatter households). The remaining 11.4% of households not making a water payment include: renters whose water bill is included in their monthly rent, people who do not have private connections and receive free water from neighbours, and households that do receive a water bill but are not submitting payments. Of those households paying for water in the study area (and aware of how much they pay)[40], the average monthly cost is Rs. 39.8 (Cdn $1.33) (a weighted average of the resettlement area and squatter colony combined).

Within the study community, residents are paying several different water tariffs, yet all are flat rates. In the resettlement area, the most common rate is Rs. 90 to 105 every three months (Cdn $3.00 to $3.50), or Rs. 30 to 35 monthly (Cdn $1.00 to $1.17). A smaller number of households in the resettlement area are paying around Rs. 50 per month, while a few are paying more than Rs. 50 per month. The fact that some resettlement area households are paying higher monthly flat rates than others suggests that the DJB's tariff system is not currently rationalized. In the squatter colony, all households pay a flat rate of Rs. 10 per month (Cdn $0.33) towards the collective water bill.

8.1.4 Community Issues

Water supply is inadequate for the Sultanpuri community in a number of respects. Most obviously, average daily per capita consumption of 47 litres is rather low compared to the city-wide average. The survey data from Sultanpuri also reveal intra-community disparity in water consumption (i.e., daily per capita consumption ranging from 6.4 litres to 187.5 litres). Insufficient supply is compounded by lack of household storage capacity, especially amongst the economically poorer households, and lack of collective storage capacity in the community.

[39] Committee member interviews #1 and 2; Saahasee, 2003a

[40] In the random household survey, respondents in 9 of 114 households (8%) did not know how much they paid for water; these cases were usually wives whose husbands took care of utility bills.

Another dimension of Sultanpuri's substandard water access is the intermittent nature of the municipal service, which necessitates that a household member must be on hand in the afternoon to collect the water. It would seem that some households have limited capacity to cope with unreliable supply, either through storage or obtaining water from neighbours, but the community overall lacks collective strategies to improve their situation.

Aside from the quantity of supply, the community has not attempted so far to address the issue of water quality they receive. Municipal water quality in general in Delhi is suspect (Zerah, 2000; VHAI, 1993) and Sultanpuri faces added risk of cross-contamination between open drains and water pipes in the community. As mentioned above, few households purify their water and, at the community level, residents do not test water quality in the area, nor do they monitor the water quality testing of the DJB.

For the community as a whole, the cost of water, even in a low-income settlement, is not high. In the resettlement area, where most households are paying about Rs. 30 or Rs. 50 per month (Cdn $1.00 or $1.67), about 93 % are paying their water bills. In the squatter colony, where households contribute Rs. 10 (Cdn $0.33) per month to the collective water bill, the proportion of paying households fluctuated between 50 % and 70 % during 2003.[41] My view is that the sizable proportion of non-paying squatter households does not signify an inability to pay for the most part, but is related to "free-riding" and other factors that will be explained further in Chapter Ten. Furthermore, when water cost is compared to average household income, households in the resettlement area are paying about 1.3 % of total monthly income for water, while squatter households are paying only 0.3 %.[42] While the cost of water in Sultanpuri cannot be considered excessive, what is probably more significant to households is the additional cost of purifying water. Boiling water every day would entail higher electricity bills or liquid propane fuel costs and represent a significant household outlay, which partly explains why so few households treat their water.

Perhaps surprisingly in a community with insufficient water overall, some amount of water is wasted. This happens mainly because not all households in the resettlement area have on/off taps on their private hydrants. Since the flow cannot therefore be turned off at some

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[41] Committee member interview #1

[42] Average household income is estimated from random survey data on average daily food costs. Daily food costs were multiplied by 31 to give monthly food costs, and monthly food costs were assumed to be 80 % of total monthly household costs. This estimation method was suggested by Kundu (2003). Using this method, average total monthly household income in the resettlement area was Rs. 3,872 (Cdn $129.07) and the same figure for the squatter colony was Rs. 3,282 (Cdn $109.40).

dwellings, any portion of the municipal supply that is not collected or utilized directly at source, spills out into the open drain or lane (Saahasee, 2003a; Sider, 2003a; Sider, 2003b). Some households do not have enough containers to collect the flow that is available, even if it is only 30 minutes a day. In addition, during the narrow window of time that water is available, everyday activities like childcare may divert the attention of the person obtaining the water.

The shortage of on/off taps in the study area could be attributable to poverty levels but it seems that theft is a factor (Saahasee, 2003a). Local drug users (or smackies, as they are called in Sultanpuri) are blamed for the theft of taps and many other items, big and small, in the community (Saahasee, 2003d). Public handpumps in the study area have been vandalized and sections of pipe from the community water system in the squatter settlement have also been stolen.[43] Water wastage, though, whether related to lack of on/off taps or other reasons, does not seem to be a pressing concern to the community at the present time.[44] Since all households in the study area pay a flat rate to the DJB, the pricing system itself is a disincentive to water conservation. During the period of my fieldwork in 2003, no measures had been implemented in the community to address the issue of water wastage.

8.2 Sanitation

8.2.1 Description of community infrastructure, facilities and services

The community drainage system is a network of open drains that connect most dwellings in the settlement, both in the resettlement area and the squatter colony. The system consists of small drains (*nali*, in Hindi) in front of the majority of houses, running parallel on both sides of lanes, which feed into several larger-size drains (*nallah*, in Hindi) within the settlement and on the periphery (Figs. 5 to 7) (Sider, 2003a). Both nalis and nallas are paved infrastructure in the study community (Sider, 2003a). In the resettlement area, drains were part of the original package of basic amenities provided by the government to residents when the settlement opened in 1977 (Saahasee, 2003b).

[43] Random survey interview #59; Committee member interviews #1 and 3

[44] During my fieldwork I did hear about another squatter settlement, New Sanjay Amar Colony in the trans-Jamuna area of east Delhi, where local residents had organized themselves, with the assistance of an NGO, into watch groups to monitor water wastage in the community.

The squatter settlement, on the other hand, had no permanent drainage infrastructure before 2001.[45] Prior to that time, squatters dug trenches around their homes (Saahasee, 2003b). In 2001, however, paved drains and surfaces were constructed in the squatter settlement as part of the PLUS Project (Saahasee, 2003b). Surface paving in the squatter colony includes all non-housing areas, including footpaths, common areas, and small open spaces around dwellings (Sider, 2003a) (Figs. 8 and 9). Drains and paving in the squatter settlement represent a significant improvement for local residents, considering that permanent drainage infrastructure is unusual in squatter colonies in Delhi (Jain, 2003). The purpose of the drainage system in a community like Sultanpuri is twofold: to collect and channel greywater (used domestic water) and to drain away rainwater.

Overall, the community drainage system in Sultanpuri functions poorly as a network for channeling wastewater out of the vicinity. According to my visual observations, nearly all nali sections had stagnant water, while the larger nallahs occasionally had flow (Sider, 2003a; Sider, 2003b). According to local residents, community drains regularly overflowed in places in the settlement, even during non-monsoon periods, with water flooding into lanes or inside dwellings.[46] The drainage problem is exacerbated during the rainy season, with residents reporting knee-high flooding in their houses.[47] In addition, community drains in Sultanpuri, both nalis and nallahs, are commonly used as a garbage dump and open toilet (Saahasee, 2003b). During my fieldwork in the community, I saw many young children squatting over drains to urinate or defecate (Sider, 2003a; Sider, 2003b). One large nallah behind the squatter settlement was commonly used.[48] Moreover, adults used drains as a toilet after sunset.[49] I observed all kinds of household garbage, feces, and dead animals in drains at Sultanpuri (Sider, 2003a; Sider, 2003b). It is very apparent that garbage, in particular, is choking the drainage system (though other contributing factors may include engineering deficiencies, inadequate repairs and land subsidence).

Workers from the Delhi government's Cleaning and Sanitation Department (CSD), as well as private sector cleaners, clean the drains in Sultanpuri. Work is performed manually in a two-step process. In the first stage, the black muck that accumulates in the drains is removed with a short, rake-like implement and left beside the drain to dry for a period of time. In the

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[45] Committee member interviews #4 and 13; Saahasee, 2003b
[46] Random survey interviews #20, 40, 71, 87, 88 and 94; Committee member interviews #9 and 31
[47] Random survey interview #52
[48] Committee member interview #12; Sider, 2003b
[49] Committee member interviews #9 and 11; Saahasee, 2003b

second step, the dried or partially dried muck is carted off and dumped at the local garbage facility (*dhalao* in Hindi) (Sider, 2003b) (Figs. 10 and 11). The frequency of drain cleaning and the promptness of muck pick-up is a bone of contention in the community, however. Sanitary inspectors in the area maintain that community drains are cleaned every day and the black muck is picked up the following day;[50] local residents, though, report that cleaning is very erratic and the muck is left uncollected for weeks.[51] Many residents expressed their sense of frustration with comments such as "They [government cleaners] never come to clean the drains."[52] One resident said that cleaners had not come to clean her drain in two years.[53]

The problem of government worker absenteeism, which has been estimated at around 30 % for Delhi as a whole (Khosla, 2004), is even more pervasive in low-income settlements like Sultanpuri where it may be 60% or higher (Khosla, 2004; Gupta, 2004). It is commonplace for government employees to pay (bribe) their superiors to record them on attendance rolls, even though they do not show up for work. Thus, they continue to receive their government salaries in absentia. Quite often, these individuals moonlight at a second job in a different locale. Sometimes, too, government employees "contract out" their jobs, paying other people a part of their salaries to physically take their places on the job (Saahasee, 2003d). Since a number of government cleaners assigned to work in Sultanpuri likely exist only on paper, the area in reality may be underserved.

For their toileting needs, residents of Sultanpuri use a combination of individual household latrines, community toilets, and open spaces and drains in the vicinity. The random survey of the study area revealed that 71 % of households have private latrines or toilets, whereas 29 % do not. As in the data collected about water connections, multi-household dwellings with a shared toilet are considered as having private access for the purpose of the survey. The figure of 71% reflects a similar pattern to household water connection, with 82.6 % of households in the resettlement area owning private toilets and none of the squatter households having private facilities (Saahasee, 2003a). In the resettlement area, households without a private toilet would come from the poorer spectrum of families. Of those households with private facilities, most survey participants report that their toilets are connected to the sewer system (88 %), while the remaining 10 % of toilets discharge into the open drain or else

[50] External stakeholder interviews #4 and 5
[51] Random survey interviews #17, 18, 20, 27, 28, 48, 50, 52, 55, 58, 64, 78, 81, 88, 106, 110; Committee member interviews #3, 9, 15, 19, 20, 26, 41; Pradhan interviews #5 and 7
[52] Random survey interview #48
[53] Random survey interview #58

respondents don't know (2 %). The actual percentage of households connected to the sewer may be lower than reported because, as a couple of survey participants explained, some residents may have been reluctant to admit to a drain connection.[54]

Prior to the PLUS project, the area had an old, dilapidated community toilet that had numerous problems, such as lack of water for flushing, inadequate electricity supply, few toilet seats, blocked toilets, and infrequent maintenance.[55] Consequently, many residents did not use the facility and instead used local parks and open spaces as an outdoor latrine (Saahasee, 2003b). In 2002, a new community toilet complex was built in Sultanpuri with Japanese funding under the Jamuna Action Plan (the Jamuna is the river flowing through Delhi) (Saahasee, 2003b) (Fig. 12). The new facility is superior to the old toilet block because it has its own tube-well and generator system, providing 24-hour water supply. A private company manages the facility and hires its own caretakers. The building consists of four units, each with a common entrance for women, men and children (Sider, 2003a). One side of the each unit is intended for women and girls, the other side for men and boys. The women's side has special facilities for young children. The new toilet complex operates under a pay-and-use system: men and women pay Rs. 1 per visit and children under 12 years are charged 50 paise (half a rupee). In 2003, the facility was under-utilized and three of the four units in the complex were closed (Sider, 2003b).

8.2.2 Household practices and problems

Findings from the random survey indicate that Sultanpuri residents have an extremely high level of understanding about the importance of clean drains for their health. In response to a survey question that inquired whether there was a link between the condition of drains and their health, 98 % percent of respondents replied yes. Many community members expressed the idea that if their drains were unclean, they or their family members would get sick.[56] Others replied that dirty drains are breeding grounds for mosquitoes, which could give them malaria or dengue fever.[57] During the period when the household survey was conducted, a dengue fever outbreak occurred in Delhi (in October 2003), no doubt heightening awareness of the health hazards of stagnant water in the community.

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[54] Random survey interviews #9 and 71
[55] Committee member interview #4; Saahasee, 2003b
[56] Random survey interviews #26 and 112; Committee member interviews #4 and 20
[57] Random survey interviews #26, 112 ; Committee member interview #8

In spite of the high level of environmental literacy about drains, many households in Sultanpuri engage in activities that are detrimental to local environmental quality. One such practice involves building structures over open drains in front of houses (Sider, 2003a; Sider, 2003b). In the random household survey, the presence and types of structures that had been constructed over drains were systematically recorded. Across the entire study area, 90 % of households in the community have an open drain directly in front of the house. Of the 90% with house-drains, fewer than 4 % of households had left their drain section entirely open. In other words, 86% of all households in the study area had drains that were completely or partially covered over. Of the 86 % of households with covered drains, 33 % had removable stone stabs, 7 % had latrines, and 66 % were covered by other built structures (the breakdown of permanent structures adds up to more than 86 % because some house-drains had more than one type of structure). Other permanent structures included paved walkways to the house, porches, stairs, bathing or wash closets, and utility areas (Sider, 2003b) (Figs. 13 and 14).

From an environmental health perspective, the latrines are a problem because most empty out into the drain below (Saahasee, 2003b) which, given the stagnant drain conditions, deposits human waste in the lanes where it remains for an extended period. Furthermore, all of the permanent structures built over drains, including latrines, complicate the task of maintenance and cleaning of drains. The stone slabs are not an impediment because they can be moved aside to permit drain-cleaning but the permanent structures, however, block off drains. During my fieldwork, government cleaners voiced complaints about the difficulties they encountered in accessing drains to do their work.[58] In Sultanpuri, moreover, the Sikligars, a caste group in the community that does iron-work on platforms built over drains in front of their houses, actively discourages cleaners from coming into their area.[59] So, while the community at a cognitive level understands the importance of clean drains, the practice of drain-covering undermines the achievement of a healthier local environment.

Another custom in the study community is for residents to place bricks in drains, at the beginning of their sections, in an effort to retard the flow of garbage into their area.[60] This practice might be beneficial for individual households, but has negative externalities for their neighbours because of bottlenecking in drains and possible flooding. For the community

[58] External stakeholder interviews #4 and 5
[59] External stakeholder interview #4; Saahasee, 2003a
[60] Committee member interviews #31 and 36; Sider, 2003b

network as a whole, the practice is counter-productive as the bricks reduce flow capacity.[61] Furthermore, bricks are one more item that has to be periodically scoured out of drains, compounding the maintenance problem.

The random survey asked two gender-related questions pertaining to sanitation work in the home, namely who cleans the family toilet and who teaches children about good hygiene habits. As for toilet-cleaning, of the 71 % of households in the study area having private facilities, women and girls perform this task in 96.4 % of households. The responsibility is shared between the head of the household and spouse in 2.5 % of households, while boy children do this work in the remaining 1.2 % of households. The division of household labour in toilet-cleaning is almost totally gendered, even more so than in water provision. Women contribute 82.6 % of the labour, including the work of daughters-in-law at 17.5 %. Girl children, at 13.8 %, account for most of the remaining toilet-cleaning. The breakdown of work from these groups follows the same basic pattern as household water provision. Hygiene education in the home, compared to toilet-cleaning, is less structured along gender lines. The percentage of households that reported doing hygiene education in the home was 87.7 % of the study community. Other households presumably did not have any young children. Of those households that do undertake hygiene education, the head of household and spouse share the responsibility in over one-quarter of households (28 %). Thus men are more active in this role. Women and girls account for almost all of the remaining hygiene education work (71 %).

Sultanpuri residents have a bevy of concerns and complaints about drains and drain cleaning in their community, as the random survey results clearly show. Probably no other environmental topic from the survey elicited as many negative remarks and unsolicited comments. When queried about their level of satisfaction with drains in their neighbourhood, 60.2 % of respondents felt that drains were very poor and another 13.3 percent stated they were poor. One woman described the drains as a "terrible problem" and another said "This [drain problem] has affected our area very much."[62] Foul odours in the neighbourhood, probably related to dirty drains as well as garbage in the area, was deemed a major problem by almost 60 % of respondents. Similarly, mosquitoes, which could be considered another indicator of the condition of drains in the vicinity, were viewed as a bane of community life. Over 81 % of survey participants reported that mosquitoes were a big problem. One man

[61] External stakeholder interview #4
[62] Random survey interviews #52 and 86

summed up the general feeling: "Nobody is cleaning the drain, they are stinking badly – because of the drains, we are suffering from mosquitoes."[63]

As discussed above, many residents were not happy with the infrequent appearance of government workers from the Cleaning and Sanitation Department in their neighbourhood, as well as the quality of their work. Comments made during the random survey and committee members survey revealed, though, that not all residents simply wait for the government cleaners to show up. Numerous survey participants said that they clean their drains every day, using their bare hands, because they do not expect the government cleaners to come on a regular basis.[64] Others, frustrated with the black muck left sitting beside their drains, transport the waste themselves to the dhalao.[65] Sultanpuri residents also reported that government cleaners only work if they pay (bribe) them. As one survey participant lamented, "If we give [government] cleaners money, only then will they work."[66] Two of the local leaders also complained that the government never repairs their drains.[67] Aside from the oft-expressed maintenance concerns, community members also stated that drunks sometimes fell into drains in a stupor and small children in the area had drowned in them.[68] One pradhan suggested placing grates over the larger nallahs.[69]

Regarding the new community toilet facility, survey respondents gave it an overall assessment of fair, although individual household reactions were rather polarized. About 32 % of households in the study area had familiarity with the facility from using it all or some of the time. Of these households, 61 % view the community toilet as very good or good, while 38.9 % rated it as poor or very poor. Residents who were not satisfied with the community toilet mostly commented about the lack of cleanliness.[70] One woman mentioned that the facility was cleaned in the morning, but in a dirty state the rest of the day.[71] Apparently, the women's side was in worse shape than the men's – one reason being that toilets tended to clog up from cloth sanitary pads.[72] The mess on the women's side was also attributed to occasional defecation on

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[63] Committee member interview #20
[64] Random survey interviews #102 and 106; Committee member interviews #3, 9, 11 and 31; Pradhan interview #10
[65] Committee member interview #31
[66] Random survey interviews #25, 52 and 61; Committee member interview #31
[67] Pradhan interviews #7 and 10
[68] Random survey interview #97; Pradhan interview #7
[69] Pradhan interview #7
[70] Random survey interviews # 14, 44 and 86; Committee member interviews #6, 8, 9, 10 and 11
[71] Random survey interviews #22
[72] Committee member interviews #4, 6, 8 and 12

the floor of the complex, either because residents did not want to use dirty commodes or else because some residents (who were rural migrants) were not accustomed to using toilets.[73] One unfortunate woman complained that she felt like throwing up when she went to the community toilet.[74]

8.2.3 Utilization of facilities/services and costs

Based on interviews with local residents who utilized the community toilet block, as well as my own visual observations, the main users of the facility were adults and teenaged children (Sider, 2003b). Young children (under 12 years) used the toilet block infrequently, possibly owing to the culture of open-air toileting of boys and girls (Saahasee, 2003a). I did not ask directly how often community members visited the toilet block each day; nevertheless, I have inferred from residents' self-reported costs (discussed below) that users of the facility typically made only one or two trips a day. If this is the case, then one would assume that toilet block-using residents are also relying on the community-at-large for daily toileting, that is, making use of open spaces, parks and drains.

Of the 31 % of households in the study area that reported using the community toilet block, the average monthly household cost of using the facility was Rs. 175.6.[75] Monthly household costs ranged from a low of Rs. 60 to a high of Rs. 480. Household payments predominately reflect usage of the toilet block from adults and teenagers. Variation in monthly household cost appears to be directly related to the number of adults and teenaged members in the household. Those households paying at the lower end of the spectrum (Rs. 100 or less) tended to have one or two adults or teenaged members, whereas households paying at the higher end (Rs. 300 or more) typically had five or more members in the same age cohort. The one household paying Rs. 480 per month, the highest amount reported, had eight adult members. Aside from the usual household expenses of using the toilet block, a number of respondents reported extra costs from additional trips during bouts of diarrhea and other sicknesses.

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[73] Committee member interviews #6 and 12

[74] Committee member interview #11

[75] The monthly household cost of using the community toilets was in most cases an estimate. The questionnaire instrument asked respondents how much their household was paying on a monthly basis to use the community toilet block. Usually respondents did not know the monthly figure, in which case they were asked how much on average their household spends per day on trips to the toilet facility. The daily figure was multiplied by 30 to give a monthly estimate.

The random survey did not inquire about drain-cleaning costs, but a number of residents voluntarily disclosed that they had to pay government cleaners Rs. 5 or 10 each time they wanted their drains cleaned.[76] As mentioned earlier, area sanitary inspectors maintained that government cleaners never took money from householders, yet it seems that some residents are paying. I was not able to ascertain, however, how widespread this practice was in the study area.

8.2.4 Community issues

The random survey data and spontaneous comments from respondents, as well as my own visual observations of the study area, revealed that the community drainage system is sub-standard. Because the drainage network was prone to blockages, water stagnation and flooding, its capacity for channeling wastewater out of the vicinity was limited. The habits of some residents, especially putting garbage and bricks in drains, tended to clog up the system. Infrequent municipal cleaning and repair of drains further impaired water flow through drainage network. All in all, the state of drains and irregularity of municipal cleaning was a major source of frustration in the community.

Other community practices, such as widespread use of drains and other open areas in the vicinity for toileting, added to the unsanitary conditions. Since nearly 3 in 10 households in the study area did not have private latrines or toilets, many young children in the community and, to a lesser extent, adults and teenagers, were using the community at large as a toilet. The cost of using the community toilets represented a significant outlay, especially for lower-income households, such that, for some residents, open-air toileting may be been the only viable alternative. In addition to human wastes, uncollected muck from drains contributed to the unhygienic environment, particularly if it was not picked up fairly promptly. After four or five days, the muck sitting beside the drains tended to end up back from where it came, as a result of being scattered about from children playing, animals wandering around, and traffic from trolleys, bicycles and vehicles in the area (Sider, 2003b). Another important aspect of the prevailing unsanitary conditions was the potential for cross-contamination of drain water with the municipal water supply.

Though nearly all households in the study area have awareness of the health implications of drains, many households engage in detrimental individualistic behaviours such as building

[76] Random survey interviews #25, 52 and 61; Committee member interview #31

permanent structures over drains (86% of households in study area), placing bricks in drains, dumping garbage indiscriminately, and using open spaces for toileting. Most local residents are well aware of the sanitation-related troubles in their community, yet they have not been able so far to work collectively to improve the local environment in this respect. Little or no incentive exists for individual households to improve sanitary conditions through removal of permanent structures over their drains if their neighbours will not follow suit. Similarly, households have little motivation to send their children to the community toilet block if other families in their lane allow them to pee or defecate anywhere. Drains are a vexing community problem that would seem to be insoluble except through concerted collective action among residents in the community, as well as cooperation from government cleaning departments.

Aside from the community's dissatisfaction with their drains, sanitation problems are a cause of strife and discord amongst residents. Garbage dumping in drains can at times lead to heated arguments.[77] Households annoyed with drain muck sitting beside their drains for an extended period will sometimes dump it in the middle of the street.[78] Moreover, local residents and NGO staff informed me that a certain antagonism exists in the community between households with drains left open or temporarily covered with stone slabs and those households with permanent drain covers (Saahasee, 2003b). The former group understands and resents the added community health risks posed by their neighbours (Saahasee, 2003b).

Another issue for Sultanpuri relates to the general lack of knowledge about municipal services to which the community is entitled (Saahasee, 2003d). Local residents do not know how many cleaners are officially assigned to their area, the names of the actual employees, or when these individuals are supposed to working in their community (Saahasee, 2003d). Adding to the confusion, one group of government cleaners does the work of scooping the muck out of community drains, while another branch of government employees has responsibility for carting it away. Moreover, since government sanitation workers usually do not wear uniforms, it is difficult to tell the government employees from private sector workers. These systemic problems are part of the underlying reason why residents in Sultanpuri have difficulty getting their drains cleaned. Until recently, after Delhi passed the Right to Information (RTI) Act in 2001, citizen groups had few if any tools with which to access

[77] Committee member interview #4; Saahasee, 2003b
[78] Committee member interview #36

information in order to demand better government services and more transparency in the system (Centre for Civil Society, 2003).

As was the case with the stolen water taps, the social fabric of the community comes into play in the sanitation sector. Some elements of the community, notably the drug addicts and sellers, as well as some family members, used the community toilet block but never paid (Saahasee, 2003d). This group includes the Saasi caste, who were reputedly involved in illegal drugs in the area (Saahasee, 2003d). A young caretaker of the toilet facility, whose job it was to collect money from users, expressed to me that he was intimidated by some groups in the community members and did not confront them for non-payment.[79] A resident who lived close to the toilet block told me "If he [the caretaker] questions the smackies, they will beat him".[80] One night in December 2003, a group of people had thrown a rock at another caretaker at the toilet block, causing bleeding.[81] Apparently, local drug addicts hung out on the property of the toilet complex, especially at night.[82] Vandalism of the toilet complex was another problem, which included stones dropped in toilets and stealing of bricks, metal rods, hardware and doors from the facility.[83]

In addition, incidents of harassment of women and girls had occurred at the toilet block (Saahasee, 2003b). The common entrance for women and men may have contributed to the problem, such that a number of women and girls were reluctant to go there (Saahasee, 2003b). Some females in the community may have also felt shy about using a common entrance.[84]

8.3 Solid Waste Management

8.3.1 Description of community infrastructure, facilities and services

The MCD Cleaning and Sanitation Department (CSD) collects garbage from two community storage facilities or *dhalaos* in the study area, one located at the northeast corner of the big municipal park and the other at the park's south end. The dhalaos are permanent MCD structures on municipal land, with concrete walls (on three sides), concrete floors and galvanized roofs (Sider, 2003a). The dhalao at the north end of the park is fairly new, having

[79] External stakeholder interview #5
[80] Committee member interview #6
[81] Committee member interview #6
[82] Saahasee, 2003a; Committee member interview #6
[83] Committee member interview #6; Random survey interview #36; Committee member interview #6; Saahasee, 2003b; During my fieldwork in Delhi, I heard about a community toilet facility in another community in the city where local residents had painted murals of gods and goddesses to discourage vandalism.
[84] Committee member interview #6

been constructed in 2002 with PLUS Project funds (Saahasee, 2003a) (Fig. 15). Adjacent to the dhalao is composting infrastructure that was constructed on the government property, also in 2001, as a related PLUS Project initiative (Saahasee, 2003a). The composting facility consists of eight brick-lined pits, each approximately 6 ft. wide x 6 ft. long x 4 ft. deep, adjacent to two of the dhalao walls (Sider, 2003b) (Fig. 16). Aside from the two dhalaos, the community has no other waste containers or bins in any open areas (Sider, 2003b).

The CSD does not officially provide door-to-door garbage collection in the study area; thus, local residents are responsible for bringing their garbage to the dhalaos. Most residents utilize the dhalao at the north end of the park because the facility is more centrally located and therefore a shorter distance from most homes (Saahasee, 2003d). This dhalao, however, is in close proximity to dozens of dwellings (i.e., separated only by a narrow street), which has led to complaints from nearby residents.

The bulk of the waste received at the dhalaos in the study area is household garbage, with smaller amounts of waste from home-based manufacturing units, black muck from drains, and street sweepings (Saahasee, 2003d). Garbage is picked up from the dhalaos in open lorries from the CSD (Sider, 2003b). Vehicles park in front of the open side of the dhalaos, where the garbage is loaded manually by *safai karamcharis* (government sanitation workers) (Sider, 2003b). These workers generally do not wear distinguishing uniforms or have protective gloves or footwear.[85] The frequency of garbage removal from the dhalao is a matter of dispute, with MCD staff maintaining that pick-up occurs once or twice a week,[86] and local residents saying that garbage often lies uncollected for a couple of weeks or even a month.[87] Residents in the vicinity of the dhalao, moreover, stated that garbage is picked up from the facility only after they complain.[88] Once the garbage is removed from the dhalao, it is transported to landfills on the outskirts of the city.[89]

As in most Indian cities, an informal waste economy exists in parallel to the municipal service in the study community. Private sector waste collectors provide a fee-based, door-to-door collection service to some, but not all, households in the community (Sahasee, 2003d). In Sultanpuri, private collectors have generally staked out their own territories (i.e., specific lanes in the community) in a proprietary system known as *lahori* in Hindi (Saahasee, 2003d). Private

[85] External stakeholder interview #9; Sider, 2003b
[86] External stakeholder interview #9
[87] Random survey interviews #21 and 22; Committee member interview #16
[88] Random survey interviews #21 and 22; Committee member interview #16
[89] External stakeholder interview #9

collectors use tricycle-carts to collect household solid waste and transport it to the dhalao.[90] The informal waste system also includes the *kabardi-wallahs*, who are private sector, door-to-door collectors of reusable and recyclable items such as newspapers, glass bottles and plastic packaging (Saahasee, 2003d). Kabardi-wallahs pay householders for marketable items, which they sell in bulk to small waste dealers. A number of local residents in the study area are engaged in this type of work.[91]

In addition, private sector waste pickers work at the MCD dhalaos in the area, including four or five at the dhalao at the north end of the park, further sorting through waste for any valuable materials[92] (Figs. 17 and 20). Since waste pickers are not officially allowed to work at MCD facilities, they must pay (bribe) MCD staff in order to gain access to waste sites.[93] Several private sector waste workers in the study community, in fact, do two types of work: collecting waste door-to-door from households in the morning, and waste picking at the dhalao for the remainder of the day. Like the safai karamcharis, waste pickers tend not to wear protective footgear or clothing, save for a bandana covering the mouth and nose when working at the dhalao (Sider, 2003b). The most valuable material that waste pickers recover from the dhalao is plastic, for which waste dealers pay them Rs. 7/kg. (Cdn $ 0.23/kg). For all other materials (e.g., glass, metals, paper), pickers receive Rs. 1.50/kg (Cdn $ 0.05/kg.). One waste picker I spoke to, who was helped by his 12-year-old daughter and 10-year-old son at the dhalao, reported earnings of Rs. 50 (Cdn $ 1.67) per day or Rs. 1,500 (Cdn $50) per month,[94] an amount considered below the poverty line (Saahasee, 2003b). This family lived outside Sultanpuri in a squatter settlement several kilometers away, inhabited entirely by waste picker households.

Aside from the men, women and children working at the dhalaos, pigs and cows freely scavenge in the waste (Sider, 2003b). As S. Gupta (2003) explains, the animals have both a positive and negative impact in terms of solid waste management – beneficial, in that the amount of garbage going to landfill is reduced, but also detrimental because the garbage is scattered around.

Informal sector waste workers, especially those who are barely eking out a living at present, face an uncertain future in light of recent legislation (effective from January 1, 2004),

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[90] External stakeholder interview #9
[91] Random survey interview #60; Committee member interview #42; Saahasee, 2003d
[92] Committee member interview #42; Saahasee, 2003d
[93] Committee member interview #42
[94] External stakeholder interview #7 (2004)

making source separation mandatory for all Delhi residents.[95] It is not clear at this time whether the legislation will effectively shut out informal waste workers from the municipal system, or whether the government will endeavor to work with or somehow incorporate the informal sector into the official system.

8.3.2 Household practices and problems

I did not undertake any waste generation studies during my fieldwork; however, Shristi, an Indian NGO active in the field of waste management, carried out a survey in January 2002 of 30 households in the study community. Before Shristi undertook the survey, they instructed participating households about source separation into wet waste (biodegradable) and dry waste (non-biodegradable) and provided two bins to each household for collecting each type of waste. Weights of wet and dry waste from each household were measured over a three-day period. The survey determined that average total waste (wet and dry) per person per day was 113 g., or 0.11 kg. (Shristi, 2002), which is a low level of waste generation compared to the range of 0.2 to 0.8 kg. as reported in the literature for major Indian cities (Agarwal and Gupta, 2003; Toxics Link, 2004). As far as the wet and dry factions, the Shristi study found that wet and dry components constituted, on average, 83.8 % and 16.2 % of household waste, respectively. The Shristi survey did not attempt any further compositional breakdown of domestic waste.

Data from the random survey show that source separation in the home (into wet and dry components) is not the norm in the study area. Only 6.1 % of households separated their waste every day, while another 5.2 % did this activity sometimes. The remainder, or 88.6 % of households, never separated their waste into wet and dry. While wet and dry separation was not common in the study community, many households did practice a less thorough form of source separation that involved separating out valuable items (e.g., glass bottles, newspapers and plastic packaging) to be sold to kabardi-wallahs.[96]

The low source separation rate in the study community could be related to a lack of proper waste receptacles in homes. Residents generally put their garbage in dustbins (small-size waste containers) or plastic bags. Approximately 62 % of households had a dustbin, whereas 38 % did not. Dustbins were mostly plastic containers or metal buckets. Often the

[95] External stakeholder interview #8 (2004)
[96] Random survey interview #15; Committee member interview #42; Saahasee, 2003d

metal dustbins were old water buckets that had become leaky or were missing carrying handles, but could be reused for holding waste. Only a minority of households (18.4 %) had covers for their dustbins. The most likely explanation for why so few households had covers for their dustbins, which would have lessened odours, as well as flies, mice and rats in the home, is that householders did not want to make a financial outlay for covered dustbins (which had to be purchased).[97] Those households without dustbins tended to place their garbage in plastic bags, which were readily available in the community because many residents bought vegetables in plastic bags on a daily basis (Sider, 2003b). Since most households in the area had only one dustbin, the NGO, Saahasee, was encouraging residents to use their dustbins for wet waste and plastic bags for dry waste.[98]

It is likely, too, that the cramped houses of residents, particularly the one-room dwellings, presented space constraints for keeping dustbins and plastic garbage bags in the home. Some community members probably found it difficulty to keep one waste receptacle, let alone two (for wet and dry waste), in their homes. A number of residents may have resisted the idea of source separation for this reason.[99] Another factor behind the low source separation rate could have been perceptual, as some householders might have believed that segregating waste meant more work. Cultural factors could have had a bearing also. Because waste in Indian society is often regarded as polluting, many residents may have been averse to keeping segregated garbage in the home, preferring to get rid of it as soon as possible (Gupta, S., 2003).

Sultanpuri residents disposed of their waste in several ways; the most common method was taking the garbage themselves to the dhalao (54.4 %), followed by door-to-door pick-up from a private waste collector (31.6 %) and, less frequently, door-to-door service from a government worker (10.5 %). A small percentage of households (3.5 %) reported disposing of garbage beside the house or in the lane. On the whole, householders with door-to-door garbage pick-up (either private sector or government collectors) were quite satisfied with the service. An impressive 94 % felt that the service was very good or good, while only 6 % rated the service as fair or poor. Although few respondents said that they threw garbage into drains, parks or open spaces, it seems very likely that such disposal methods were under-reported, perhaps out of embarrassment or fear of imagined consequences. While respondents may have

[97] Random survey interview # 52
[98] Committee member interview #42; Saahasee, 2003d
[99] Random survey interview #31

been reluctant to admit to their own indiscretions, many commented that their neighbours tossed their garbage carelessly in the community.[100] A couple of survey participants claimed that indiscriminate disposal of garbage occurs mainly at night.[101] Several residents remarked that abandoned houses in the study area were routinely used as dumps, especially in E1, which my own visual observations confirmed[102] (Figs. 19 and 20).

Waste-related chores in the home (i.e., source separation and garbage disposal) are, once again, principally the domain of women, with girls in a supporting role. Women, including daughters-in-law, are responsible for managing and disposing of waste in 72.8 % of households in the study area. The work is shared between the head of household and spouse in another 3.5 % of households. Girls perform waste-related tasks in 13.2 % of households, with boys accounting for 5.3 %. Male heads of household and other adult males do this work in the remaining 5.3 % of households. While children, both girls and boys, are involved in waste-related activities in nearly one-fifth of households, one survey respondent remarked that she did not sent her children to dispose of the family garbage because of the "corruption and violence" in the community.[103] Perhaps other households felt the same way and one wonders whether more children would be taking out the garbage, but for the social conditions in Sultanpuri.

Findings from the random survey clearly show that residents think that garbage is a major concern in their community. When asked how they felt about litter in lanes and open areas of their community, 60.5 % of respondents stated that it was a big problem. Another 11.4 % considered litter to be a small problem, and the remaining 28.1 % said it was not a problem. The data on foul odours in the community, moreover, is relevant to the garbage situation. As mentioned above in the discussion on sanitation, almost 60 % of residents considered bad odours to be a big problem, which could a reflection to some extent of uncollected garbage as well as dirty, stagnant drains. The random survey also solicited residents' views about flies and rats in their neighbourhoods, other barometers of litter and uncollected garbage in their midst. Over three-quarters of respondents (75.4 %) felt that flies were a big problem in their settlement, compared to 13.2 % who said that flies were a small problem, and 11.4 % who said it was not a problem. Similarly, almost three-quarters of respondents (72.8 %) felt that rats

[100] Random survey interviews #3, 17, 23, 34, 59, 92 and 93; Committee member interview #22
[101] Random survey interview #3; Pradhan interview #5
[102] Random survey interviews #9 and 17; Pradhan interview #5; Sider, 2003b
[103] Random survey interview #8

were a big problem, with only 8.8 % replying that they were a small problem and 18.4 % that they were not a problem. One woman remarked that she had seen rats that were the size of cats in her neighbourhood.[104]

8.3.3 Cost of door-to-door garbage collection

The percentage of households in the study area that paid for door-to-door garbage collection service, either to private or government waste collectors, was 36.8 %. Those households were paying an average of Rs. 12.6 (Cdn $0.42) per month for the service, with costs ranging from Rs. 5 to 20 (Cdn $0.17 to 0.67). As noted earlier, the majority of collectors in the study community are from the private sector, rather than government employees. MCD workers who pick up garbage door-to-door are providing a service above and beyond their official duties, and monies earned from householders are supplementary to their government salaries (Saahasee, 2003d). A number of households paid with food instead of money – giving one or more *chappatis* (Indian wheat bread) to the waste collector at the time of each garbage pick-up.[105]

8.3.4 Community issues

It is obvious that a large amount of garbage lies uncollected in the study area, much of it the result of indiscriminate dumping on the part of local residents. Garbage tossed in drains, parks, open spaces, and vacated houses had the effect of despoiling community amenities. Plastic bags, which many households in the community use to store waste, are a major problem because they are non-biodegradable and clog up drains. Furthermore, inappropriate disposal practices of some residents, who may be in the minority, nonetheless contribute to poor environmental conditions, as evidenced by residents' discontent with litter, foul smells, flies and rats in their neighbourhoods.

Another issue for the community was the quality of service they received from the municipal government. Residents were disgruntled, in particular, with the irregular removal of garbage from the two dhalaos in the study area.[106] Several residents complained about irresponsibility and indifference of government workers (e.g., that they did not listen to the

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[104] Random survey interview #69
[105] Random survey interview #72; Committee member interviews #32, 34 and 40
[106] Random survey interview# 21; Committee member interview #31

community).[107] Moreover, community members were dissatisfied with the CSD administration of fines for residents who dumped garbage inappropriately, which they felt was done arbitrarily and unfairly (i.e., fining some residents, but not others who did the same thing).[108] On the other hand, CSD employees also had complaints about the community. Government workers expressed the view that community members dump garbage everywhere and do not appreciate their efforts.[109] One CSD inspector confided that some of his workers were afraid of getting beaten by community members.[110] The same individual revealed that workers were also concerned about being reprimanded by the local councilor or even losing their jobs, should they fine residents with kinship or political ties.[111]

Tensions also appeared to exist between private sector and government waste workers in the study community. Waste pickers were unhappy about doing work they felt was the responsibility of the municipality, such as having to unload waste piled on tricycle-carts that had been left by government workers from their door-to-door collection.[112]

In addition, systemic issues worked against more efficient solid waste management in the study community. Problems included government employee absenteeism, confusion among residents about who were bonafide government employees (because they usually do not wear uniforms), and the shortage of lorries with which to pick up waste from the dhalao on a regular basis.[113] As was the case with sanitation, residents had a lack of knowledge about their entitlement to municipal service, in particular the assignment of workers to their area, the standards of work to be expected from government employees, and legitimate avenues for redressing community concerns.[114]

Another problem in the community was a locally-unwanted land use, namely, the dhalao located in the northeast corner of the big park. This is an example of NIMBYism (Not In My Backyard), as residents living in the immediate area were firmly opposed to the dhalao when it was constructed a few years ago.[115] Saahasee, the NGO, went ahead anyway because they believed that the centrally-located site would encourage greater use of the facility (Saahasee,

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[107] Committee member interview #31
[108] Committee member interview #24
[109] External stakeholder interviews #4 and 9
[110] External stakeholder interview #4
[111] External stakeholder interview #4
[112] External stakeholder interview #7
[113] Committee member interview #42
[114] Saahasee, 2003e; External stakeholder interviews #24 and 42
[115] Random survey interview #21; Committee member interviews #15 and 16

2003d). The dhalao, however, has engendered some hard feelings between nearby households and the NGO. Residents in the vicinity, of course, were most affected from tardy removal of waste from the facility. Furthermore, local residents complained about extra flies, mosquitoes and rats, as well as increased coughing, sneezing and other sicknesses, which they attributed to the dhalao.[116] An old woman in the house directly across the street from the dhalao said that the smell was so bad on collection day that she cannot eat food.[117] She resented not being able to sleep outside on the terrace during hot weather on account of the foul odours. Because of the nearby dhalao, the woman wanted to sell her house.[118]

To some extent, anti-social elements in the community, mostly related to theft and vandalism, had a negative effect on solid waste management. Many residents talked about rampant theft in their community, such that anything left outside around the house could disappear at any time.[119] It was commonplace for even items of minimal value, like dustbins, to be stolen in the community – and this actually happened during the course of one of my household interviews in the squatter settlement. When the survey question was asked about whether the household had a dustbin, the woman respondent pointed to the place outside her house where she had left her dustbin only 10 minutes previously and, to her dismay, it had vanished.[120] Such incidents are common in the study area, as illustrated in the wry comment of another resident who said: "If I left dust and garbage outside my house, they would steal that too."[121] Given the level of theft in the area, some community members would understandably be reluctant to invest in a dustbin, if it might disappear soon afterwards, and this aspect of community life may have indirectly contributed to improper dumping in the area.

The gate to the most heavily-used dhalao (at the north end of Hazari Park) had also been stolen, allegedly by drug addicts in the community.[122] The missing gate allowed pigs and cows to enter the dhalao, resulting in garbage being strewn about in full view of dozens of houses. Not only was the mess an eyesore for nearby residents, the waste pickers working at the dhalao commented that the animals tended to mix up and further contaminate the waste, making their work more difficult.[123] In addition, inappropriate dumping of solid waste in various open

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[116] Random survey interview #21; Committee member interviews #15 and 16
[117] Committee member interview #16
[118] Committee member interview #16
[119] Random survey interviews #9, 21, 23 and 30; Committee member interviews #6, 9, 11, 14, 21 and 22
[120] Committee member interview #9
[121] Random survey interview #9
[122] External stakeholder interview #9
[123] External stakeholder interview #7

spaces in the the community, such as into drains, abandoned houses, parks and open areas, was a source of frustration amongst residents, but also a trigger for quarrels and occasional physical fights.[124]

8.4 Local Parks

8.4.1 Description of community infrastructure, facilities and services

Green space in the study community consists of one large park and several small parkettes on government land belonging to the Municipal Corporation of Delhi (MCD) and maintained by the MCD Horticulture Department. These parks are part of the basic amenities provided to residents when the settlement was established in the late 1970s (Saahasee, 2003a). Of the total study area of 51,000 square metres (5.1 hectares), parks occupy approximately 15,400 square metres (1.54 hectares) or about 30 % of the land use (Sider, 2003b). In contrast to many other resettlement colonies in Delhi where squatters have colonized open spaces over the years (Ali, 1990; 1998), parks in the study area have, for the most part, not been converted to other uses and remain as public amenities (Sider, 2003b).

The biggest park, known as Hazari Park, is a rectangular-shaped piece of land approximately 10,000 square metres in size (1 hectare) (Sider, 2003b). Centrally located within the study area, the park is bordered on three sides by residential neighbourhoods (E1, E6 and E7) and, on its fourth side, by a main road and greenbelt area. The entire park area has a permanent boundary wall, with one gate on each of its four sides. In terms of natural features, the park is flat and has little greenery, making for an open appearance (Sider, 2003b) (Fig. 21). Vegetation, which includes trees and other plantings, is restricted to the perimeter of the park (Fig. 22). To protect from children playing and animals, and to discourage theft, the row of plants around the perimeter was cordoned off with barbed wire fencing during my fieldwork period. Saplings were encased in metal plant guards for the same reasons. The park interior was bare soil, though the Horticulture Dept. did seed the south end during the period of my fieldwork (in November 2003) (Sider, 2003b).

While most of Hazari Park is reserved as open space, other land uses include a walled-off garbage dhalao at the north end (heavily used, as explained in the previous section), and a community hall, public toilet block, Horticulture Dept. nursery (Fig. 23), and another dhalao at

[124] Random survey interview #71; Committee member interview #4; Saahasee, 2003b

the south end. The park was also used as open space for dogs, pigs, cows and buffaloes in the area (Sider, 2003b).

The open area in Hazari Park reflects a fairly recent initiative that occurred in 2001, when the park was redeveloped as part of the PLUS Project (to be discussed later in Chapter Ten). Prior to that time, the park had no facilities to speak of (outside of the non-park land uses noted above) and was frequently used as an open-air toilet, garbage dump, and hang-out for drug addicts and dealers.[125] Under the park redevelopment scheme, a network of elevated, paved walkways was constructed that wind around the perimeter and cut across the interior in a number of places (Saahasee, 2003a). The walkways have both a functional and a design-related purpose: first, they are beneficial for walking, especially during the rainy season when the ground becomes muddy; and second, the walkways serve to delimit different spaces or activity areas and thereby promote multiple uses of the park. For example, the large expanse in the middle of the park is usually devoted to cricket and the smaller areas at the north end are used for children's playground equipment and informal games (Fig. 24). The pathways also link up a number of raised platforms that are conducive for sitting or socializing in groups (Sider, 2003b).

Hazari Park also has an outdoor amphitheatre that can accommodate up to 200 people (Fig. 25), as well as lighting (Sider, 2003b). This infrastructure, like the walkways, came out of the PLUS park initiative (Saahasee, 2003a). Lighting is provided from a single source, a halogen lamp situated at the north end of the park, which illuminates part of the area but is not adequate for the entire park. While significant improvements were made in Hazari Park in recent years, facilities could be seen as nevertheless wanting in terms of better seating (e.g., benches), more greenery, structures to provide shade from the hot Delhi sun, litter bins, and security at night. Though some parks in Delhi have night watchmen (employed by the Horticulture Dept.), Hazari Park did not have anyone assigned to patrol the area during the period of my fieldwork (Saahasee, 2003b).

In addition to Hazari Park, the community has eight small parkettes dispersed throughout the three residential neighbourhoods, ranging in size from 240 square metres (0.024 hectares) to 1300 square metres (0.13 hectares) (Sider, 2003b). All but one of the parkettes had little greenery and none had grass (Sider, 2003b). Facilities were also limited in the parkettes, though three of them had children's playground equipment (Sider, 2003b). The local

[125] Committee member interview #25; Saahasee, 2003a

councillor had appropriated one of the parkettes that was close to her house and used the space to conduct her political work and meet with residents (Saahasee, 2003d). Of all the parkettes, the local councillor's parkette had the best facilities, including lighting, benches, outdoor sculptures and a covered meeting area (Sider, 2003b). Other parkettes were used for a variety of uses such as temples, Mother Dairy vendors, government storage facilities, buffalo dung drying areas, and materials and machinery for home-based enterprises.[126] A couple of parkettes were empty and padlocked during my fieldwork (Sider, 2003b).

8.4.2 Utilization and costs

Data from the random survey show that the majority of households utilized the local parks fairly regularly, though a sizeable minority did not go to the parks at all. About 38% of households reported that one or more members (including adults and children) went to the park every day and another 32% of households went a few times every week. The remaining 30% of households stated that they never visit the community parks. The most common activities undertaken in the parks, as reported by survey participants, were children playing (43% of households in the study community), walking (31%), cricket (11%), relaxing/sitting (10%), and social functions (6%). Not surprisingly in a country such as India, boys were playing cricket in Hazari Park, as well as in a number of the local parkettes, throughout the day (Sider, 2003b). Periodically, social functions like weddings were held in Hazari Park (Sider, 2003b).

As the types of activities listed above would suggest, both children and adults were making use of community parks. The primary user group, however, was school-aged children, based on my visual observations of the local parks during my fieldwork (Sider, 2003b). Boys appeared to outnumber girls. I also observed men sitting in groups in the parks, usually socializing, playing cards and sometimes drinking, but seldom saw women in the vicinity (Sider, 2003b). Female teenagers, too, did not appear to spend much time in the parks (Sider, 2003b). The main users of the community parks, then, were boys and girls, male teenagers, and men.

Though 70% of respondents reported that one or more household members utilized the parks on a daily or weekly basis, one might wonder why the figure was not even higher, given

[126] According to a senior official in the Delhi Horticulture Department, conversion of municipal parks into other land uses is quite common in Delhi, with approximately 50 % of park land in the city having been captured for other uses, especially temples (External stakeholder interview #11)

the abundance of open space in the community and the comparatively cramped quarters of the homes and lanes. Why was it, in other words, that 30% of households in the community never visited the local parks? To some extent, this can be explained by the demographic profile of certain households, in particular the families with young children and those with old, frail or infirm members. Several young mothers, for instance, said that they did not want to send their small children to the park unescorted.[127] From my visual observations of the community, it did seem that young children (up to five or six years) tended to stay close to the home or in the lane, usually watched over by mothers, older siblings or neighbours (Sider, 2003b). For many mothers who were tied to their homes with reproductive duties and, in some cases, productive activities, it was obviously easier to keep infants and toddlers within sight or, at least, within earshot.

The female teenagers, on the other hand, refrained from using the parks largely on account of the pervasive teasing and harassment they are subject to from males in public places.[128] One young woman from the community, an 18-year-old engineering student, told me that she never went to Hazari Park, which was directly in front of her house, for this reason.[129] Rather than frequenting local parks, female teenagers spent their time outside of the house in the lanes, often assisting their mothers with household chores or childcare, playing games like hopscotch or badminton, or sitting and socializing (Sider, 2003b). I witnessed the occasional cricket game with girl players, but this occurred in the lanes and not the parks (Sider, 2003b). Because of problems of harassment, one woman from the Parks Committee felt that Hazari Park ought to have a separate area designated for female teenagers, with some sort of security in place.[130]

Survey participants were also asked for their opinions of the community parks, to which the response was somewhat polarized yet, on the whole, negative. Approximately 27% of respondents felt that the parks were very good or good, while 67% of respondents rated them as poor or very poor. Another 5% of survey participants rated the local parks as fair, while 1 % did not have an opinion. Respondents who had a positive view of the local parks may have considered the settlement fortunate to have so much open space or perhaps they or their family

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[127] Random survey interviews #59, 60 and 70

[128] Random survey interview #72; Committee member interviews #19 and 23

[129] Committee member interview #15

[130] Committee member interview #19. In some parts of Delhi (the more affluent areas), a number of municipal parks are reserved for females only. These so-called "Ladies Parks" have high walls to provide a measure of privacy and security, as well as women gardeners on duty (External stakeholder interview #11).

members were benefiting as regular park-users. Those respondents who had a negative opinion gave several reasons, the most common being the unclean conditions in the local parks. Respondents complained about garbage in the parks, the use of the area as an open-air latrine, and animals roaming around.[131] Numerous residents made comments like "The parks are very dirty" and "Everybody uses the park as a latrine and for throwing garbage".[132] Numerous respondents also commented on the lack of greenery and facilities such as seating.[133]

Several survey participants said that they and their family members stayed away from the local parks because of undesirable influences, particularly in regards to children. One mother, for instance, remarked that she didn't allow her small boys to go to the park because they would be exposed to bad language, which they would pick up.[134] This woman was also concerned about "dirty and bad people there, playing cards...my children will see that and imitate."[135] As well, quite a few residents avoided the local parks on account of illegal drug activity and prostitution occurring there. One very frustrated man, who lived in a house facing the big park, said "We never go [to the park] – we can't even think about going because of the fighting, people teasing, men sitting and drinking, and people selling drugs."[136]

Regarding costs of using local parks, access was free to residents in the study community, except a fee charged by the Horticulture Department to those who hosted weddings and other major social functions in these places. The payment for holding such an event in Hazari Park was a security deposit of Rs. 5000 (Cdn $ 167), of which approximately Rs. 1800 (Cdn $60) was non-refundable (going toward park rent, license fee and cleaning charges).[137]

8.4.3 Community issues

Certainly the study area is well-endowed with municipal parks that are used often by groups in the community for a range of activities. Nonetheless, a common concern that residents voiced was the inferior environmental quality of the parks, as a consequence of garbage dumping, indiscriminate toileting practices, and access by animals. From my visual observations, the

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[131] Random survey interviews #9, 21, 23, 44, 45, 67, 71, 78, 86, 87, 89, 92, 93, 111, 114; Committee member interviews #9, 10, 11
[132] Random survey interviews #89 and 92
[133] Random survey interviews #33, 46, 65 and 80; Committee member interviews #6, 16, 17, 21, 22, 25 and 26
[134] Random survey interview #60
[135] Random survey interview #60
[136] Random survey interview #25
[137] External stakeholder interview #10

north end of Hazari Park (near the squatter settlement), in particular, was a favourite dump site (Sider, 2003b). Furthermore, though the parks were indeed open spaces and, as such, would have to be considered assets in the context of a congested settlement, most could not be considered green spaces. Since the residential neighbourhoods themselves were either built-up or paved over, the absence of plants and grass in the parks meant that the community, as a whole, was lacking in greenery (Sider, 2003b).

Though Hazari Park did have some facilities, it did appear to me that they were under-utilized in some cases. An example of this was the outdoor amphitheatre, which was used informally by children as a play area, but rarely for other purposes like community meetings or cultural events. During my fieldwork, I never saw the amphitheatre used for any purpose other than a play area (Sider, 2003a; Sider, 2003b). According to the NGO, however, the amphitheatre had been used in the past for a children's health camp and educational programs (Saahasee, 2003e). Other facilities in Hazari Park that I seldom saw in use were the walkway around the perimeter of the park and the platforms for sitting (Sider, 2003b). Furthermore, several of the parkettes, which had either been padlocked or appropriated by the local councilor, had been taken out of general use (Sider, 2003b). The reason that two of the parkettes had been locked, I was told, was to prevent animals from going inside. Furthermore, while some amount of open space and facilities were under-utilized, it could be argued that the parks were deficient in essential infrastructure like benches, structures to provide shade, and litter bins.

As males were the dominant users of the community parks and females, with the exception of young girls, were only occasional visitors, these places would have to be considered gendered spaces within the settlement. Social norms and gender roles, it would seem, precluded greater use of the local parks by women and teenaged girls, whose access to public space was essentially restricted to the neighbourhood lanes (Sider, 2003a; Sider, 2003b). Use of parks was exclusionary in another sense, which affected both genders, because those households that were concerned about negative influences or illicit activities tended to stay away. Some anecdotal evidence from community residents suggests that the parks were more of a place to be avoided in the evenings and nights, rather than the daytime, owing to the proliferation of stealing, drinking, drugs and prostitution-related activities after sunset.[138]

[138] Random survey interview #23; Committee member interviews #17, 19 and 23

Another problem that the community faced was widespread destruction of pubic amenities and facilities in the local parks. The most obvious occurrence of this was the vandalizing of the walkways in Hazari Park, which involved removing the bricks from which they were constructed.[139] Bricks were taken out of the park, possibly to be used in house construction or repair,[140] or else used in the park by children. Boys often piled the bricks on top of one another to build cricket wickets (Sider, 2003b) (Figs. 26 and 27) or threw the bricks, resulting in a lot of broken bricks strewn around the park (Sider, 2003b). Girls, on the other hand, tended to construct houses out of the bricks (Sider, 2003b). Bricks from the amphitheatre had also disappeared.[141]

Small trees and plants in Hazari Park had been taken or else damaged, perhaps as a result of children playing or the animals in the area.[142] Wooden benches that belonged to Hazari Park at one time had been moved out of the park to nearby lanes.[143] Stone benches that were in the park some time ago had been broken to make slabs for covering drains in front of houses.[144] Playground equipment, including the children's swings, had vanished, as had Horticulture Department information boards providing rules and regulations.[145] The overhead light in Hazari Park had been broken – deliberately by members of the community, according to one local resident, to facilitate illegal activities in the park in the evening.[146] Metal items, like gate locks, plant guards and barbed wire used to protect plants around the park perimeter, had been taken.[147] The boundary wall around Hazari Park, moreover, had been damaged in several places (Sider, 2003b).

With the level of vandalism and theft in Hazari Park, as well as the host of other nefarious activities occurring there, many community members felt that a park watchman (employed by the Horticulture Dept.) or greater police presence was required to deal with the situation.[148] Apparently, Hazari Park did have a night watchman for a couple of months in

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[139] Walkways had a top laver of interlocking bricks that were not cemented together, so once one or two bricks were removed, a large number of bricks could be easily removed.
[140] Random survey interview #15; Committee member interview #22
[141] Random survey interview #15; Sider, 2003b
[142] Random survey interview #72; Committee member interviews #9 and 21; External stakeholder interview #11
[143] Random survey interview #80; Sider, 2003b
[144] Committee member interview #9; Saahasee, 2004
[145] External stakeholder interview #11
[146] Committee member interview #17
[147] Committee member interviews #1, 17 and 25
[148] Random survey interviews # 45, 46 and 74; Committee member interviews #17, 21, 22, 25 and 26

2002, after the park redevelopment project was completed, but the person disappeared.[149] Since that time, Hazari Park has not had a watchman.[150] The prevailing view was that since it was government property that being damaged or stolen, the Horticulture Department ought to provide the necessary security. While one watchman, or even several of them, would not have been very effective against men armed with knives or guns, or people operating in gangs, it is conceivable that an authoritative presence might have discouraged some illegal activities.

According to several residents, Hazari Park did have a police sub-station some seven or eight years previously, at which time vandalism problems and other crimes were apparently less.[151] So, even though local police are very likely part of the current problem (i.e., condoning, if not abetting, drug- and prostitution-related activities), with more police in the area, as one local resident explained to me, illegal activities would not stop but might decrease because the cost of bribes and commissions would be somewhat of a deterrent.[152] What is more, any attempts to bring back the police sub-station to Hazari Park would likely be resisted by the local pradhan who lived beside the park and was a drug dealer himself, as well as others in the community whose livelihoods might be similarly jeopardized.[153]

Similar to the community's sense of frustration over the irregular municipal cleaning of their drains and poor sanitary conditions in their environment, many residents were dissatisfied with the quality of service they were receiving from the Horticulture Department. One member of the local Parks Committee, for instance, complained that "[Government] maintenance of the park [Hazari Park] is zero".[154] In support of this view, Saahasee field staff maintained that many plants in Hazari Park had died, as a consequence of inadequate watering (Saahasee, 2003b). Moreover, sentiment existed in the community that the Horticulture employees "don't do any work."[155] Other complaints from local residents included non-attendance of Horticulture Department workers and drinking on the job.[156] In addition, comparable to the sanitation issue, the community had a lack of knowledge about their entitlement to service from the Horticulture Department, for example, the number of workers assigned to their parks, the duties and responsibilities of employees, and their schedules (Saahasee, 2003d).

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[149] Committee member interview #25
[150] Committee member interview #25
[151] Committee member interview #23
[152] Committee member interview #17
[153] Committee member interview #23
[154] Committee member interview #16
[155] Committee member interview #25
[156] Committee member interview #25

The local Horticulture Department supervisor, who spent a lot of his time at Hazari Park, provided information that adds credence to the community allegations. This individual, who had been posted to Sultanpuri only two months earlier, candidly admitted that gardeners at Hazari Park were used to leaving work after lunch, but he was now insisting that they remain for the afternoon.[157] The supervisor confided that his workers did play cards and drink on the job and, when he confronted them, they made a complaint to the local councilor about him. Regarding the non-attendance issue, the supervisor said that it was common practice in his department for workers to pay supervisors Rs. 2000 a month to keep them on the attendance records.[158]

Horticulture Department officials, for their part, did have serious complaints about the study community, too. One senior official I spoke to said that Sultanpuri residents do not have the awareness to use the parks properly.[159] This official blamed the squatter population in the area for causing most of the problems in the local parks. The supervisor, whom I referred to above, was exasperated with the community, saying "If I send somebody to clean [the park] today, [then] tomorrow it will be dirty.[160] He felt that his work was not appreciated in the community and related an incident in which a mother had slapped him after he rebuked her child for using the park as a latrine.[161] My view is that some members of the community, at least, also recognized a lack of community responsibility and ownership of the local parks. Several members of the Parks Committee, for instance, commented that the community did not know how to maintain their parks.[162]

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[157] External stakeholder interview #10
[158] External stakeholder interview #10
[159] External stakeholder interview #11
[160] External stakeholder interview #10
[161] External stakeholder interview #10
[162] Committee member interviews #19, 21 and 24; Additional discussion concerning residents' views of environmental conditions in the study area are included in Appendix C.

Chapter Nine: Social Capital in Sultanpuri

This chapter investigates social capital within the study community and pertains to my second research question. The primary source of data was the random household survey, while secondary data sources were the three smaller surveys of environmental committee members, *pradhans* (local leaders), and external stakeholders. The discussion reflects an understanding of social capital as being multi-dimensional in nature rather than a single entity. As such, various indicators of social capital are employed to capture its sources, which include structural and cognitive components, as well as its outcomes.

The chapter is divided into seven main parts. The first section focuses on the structural component of social capital, that is, associations and informal networks. The second section looks at the cognitive dimensions of trust and social norms. The third section assesses the social cohesion of the community, a quality that reflects broad social divisions such as caste, religious affiliation, gender, class and other differences. The fourth section covers customary forms of community engagement and political action. The fifth section examines several anti-social behaviours in the community that have a potential bearing on social capital. The sixth section is about the local leadership of the pradhans. The seventh, and final, section provides an overview of the vertical or linking relations between residents of Sultanpuri and government service providers, area politicians and Saahasee.

9.1 Structural Aspects

The structural component refers to the various, tangible connections between members of the community which are thought to facilitate collective action at the grassroots. The random survey collected data on two forms of structural social capital in Sultanpuri: associations and informal networks.

9.1.1 Associations

Beginning with associations, the survey instrument included five indicators of community-based organizations (CBOs). The first indicator measures the level or "density" of associational membership across Sultanpuri; respondents were asked whether they or any of their fellow household members currently belonged to any organizations in the community. As shown in Table 9.1 below, of the 114 households surveyed, 27 households belonged to one or more associations, while the remaining 87 households were not members of any groups. Of the

Table 9.1. Number of Memberships in Local Organizations by Household

Number of Memberships	# of Households	Percentage
0 Groups	87	76.3
1 Group	21	18.4
2 Groups	5	4.4
3 Groups	0	0.0
4 Groups	1	0.9
Totals	114	100.0

27 households that had an associational affiliation, most (21 households) belonged to one association only. The level of household associational membership for the entire community was, therefore, about 24 %. Since a few households belonged to multiple organizations (six households), the mean number of associational memberships per household is a slightly higher ratio, or 0.31.

The density of associational membership on a per adult, rather than household, basis is 6.7 %.[1] By way of comparison, at 6.7 %, the level of association in Sultanpuri is lower than the national average which several studies place at between 8 % and 15 % (Chhibber, 1999; Mitra and Singh, 1999; Chhibber et al., 2004). It is difficult to make a definitive comparison because different surveys may have counted associational membership differently in terms of which categories of organizations were included and which were not, and what time frame was considered relevant for membership (e.g., currently, within the past year, within the past five years). Regardless of how membership is operationalized, though, it appears that associational life in Sultanpuri is fairly low, even with the community organizing undertaken by Saahasee. Residents of Sultanpuri could not be described as a community of "joiners" to the extent, say, of Kerala in south India, as portrayed by Swain (2004) and Heller (1996).

The main types of associations that are active in Sultanpuri are provided in Table 9.2 below. Associational life in Sultanpuri consists of customary forms that existed prior to NGO intervention, and relatively recent organizations that were created as a result of Saahasee's work there, beginning in 1998. Customary associations include cultural groups, which are local branches of the *Rashtriya Swayamsevak Sangh* (RSS, the national-level organization that

[1] This percentage was calculated by dividing the number of households with one or more associational memberships (27 households) by the total number of adults in the 114 households sampled (406). This calculation assumes that only one member in each of the participating households was involved in the association; this is probably true for most of the associations in the community but it is possible that, in the case of the *chit* fund groups, multiple members of households may have been involved (e.g., the head of household and spouse), in which case the level of associational membership per adult for the entire community would be a little higher.

promotes *Hindutva*) and *chit* funds, a popular informal savings and credit scheme in India.[2] The Saahasee-induced organizations include the thrift and savings groups that formed the core of the NGO's work, a sewing and tailoring group (vocational training), and the various environmental committees (for water, sanitation, parks and solid waste management) that were established through the PLUS Project. Sewa Bharati, another NGO operating in Sultanpuri, was primarily involved in vocational training and not community organizing.

9.2. Type of Membership in Local Organizations by Household

Type of Organization	# of Households
Cultural groups (RSS)	3
Chit funds	9
Saahasee thrift and savings groups	11
Saahasee environmental committees	10
Saahasee sewing group	1
Sewa Bharati	1
Totals	35

Further to Table 9.2, the 27 households comprise a total of 35 memberships. The majority of memberships, that is, 22 of 35 memberships, represent Saahasee-related associations. Customary associations, which include RSS and *chit* funds, account for 12 of the 35 memberships. If one were to exclude, for the moment, the NGO-sponsored associational component, the level of membership in customary associations per adult in Sultanpuri would be about 3.0 %.[3] The sample data from Table 9.2, moreover, do not show the presence of any caste or women's organizations; however, I learned from other sources that some community members were members of these types of associations. The *pradhans* survey, for instance, revealed that two of the seven *pradhans* in the community were members of caste-based organizations. Regarding the women's association, Saahasee (2003b) informed me of an independently-formed *mahila mandal* (women's group) in the community that had a membership of about ten women. Thus, the reason that the caste and women's associations

[2] *Chit* funds are a type of rotating savings and credit association (ROSCA), an informal financial institution that is common in developing countries. A *chit* fund is a voluntary group of individuals who agree to contribute a certain amount of money at set intervals towards a common fund, which is then allocated in turn to each individual within the group according to some agreed-upon principle. Lower-income groups typically use *chit* funds to pay for major expenses and as a form of insurance (Calomiris and Rajaraman, 1998). In the study community, *chit* funds were formed among a small group of neighbours, usually from the same lane.

[3] The percentage was calculated by dividing the number of households with one or more customary (non-Saahasee) associations (12 households) by the total number of adults in the 114 households surveyed (406 adults).

were not captured by the survey is likely because the number of members was small. In light of the fact that the thrift and savings groups, as well as the sewing group, were composed entirely of women, though, these associations could be viewed as de facto women's groups.

The survey, moreover, did not turn up any youth or recreation associations; according to Saahasee (2003b), there were no such groups in Sultanpuri at the time. One respondent, though, informed us that the RSS group offered yoga and meditation activities for its members.[4] Saahasee, in addition to the NGO-affiliated organizations listed in Table 9.2, ran a program for recovering drug addicts in the community; this program, which could be broadly understood as an association, was also not enumerated in the survey, possibly because respondents did not wish to disclose such information or else the number of participants, again, was small. Finally, Saahasee's thrift and credit groups, which were lane-based, were amalgamated into a federation structure; this was the closest thing to a community-wide association in Sultanpuri.

Respondents of households having an associational affiliation were asked to identify, for the organization deemed most important to the household, who in the household was the member. The findings, provided in Table 9.3 below, show that associational membership is predominantly held by heads of households and spouses (combined, accounting for 23 of the 27 memberships), with the remainder held by teenaged- or young adult children and other adult household members (in extended families). The low number of non-heads of households and spouses is perhaps surprising given that extended families make up close to 40 % of households in Sultanpuri. The gender breakdown of association members is about two-thirds female, one-third male.

Table 9.3. Distribution of Membership by Household Position and Gender

Household Position	Male	Female	Totals
Head of Household	7	5	12
Spouse	2	9	11
Children (teens or adults)	1	1	2
Other adult members	0	2	2
Totals	10	17	27

[4] Random survey interview #98

The same group of households (i.e., those having an associational affiliation) was asked about the main benefits of joining, the findings of which are presented in Table 9.4. The most-frequently cited reason was that of improvement in the household economy, which attests to the relative importance of the Saahasee savings groups and the neighbourhood chit funds. The

Table 9.4. Main Benefit from Joining the Organization

Type of Benefit	# of Responses
Improves household finances	13
Benefits the community/ Increases access to services	5
Enjoyment/recreation	1
Spiritual	3
Social status	1
No benefits	4
Totals	27

second-most mentioned reason, pertaining to community-wide benefits and increased access to services, reflects the activity of the Saahasee environmental committees. A few survey participants gave other responses such as personal enjoyment, spiritual reasons, and social status. Four of the 27 respondents stated that their associational memberships had garnered no benefits to themselves so far.[5]

Respondents from households having no associational affiliation, which amounted to 87 households or 76 % of the survey population, were queried about their reasons for not joining any community organization. The list of reasons given is shown in Table 9.5 below. What stands out in the data is the high percentage of respondents (42 %) who cited their lack of money as grounds for non-engagement in associations. This reaction seems puzzling considering that many, if not most, CBOs in low-income settlements would probably not require direct expenses such as membership fees; a possible explanation is that respondents were thinking of Saahasee's savings and credit groups, which do involve regular monetary contributions. For households that are really struggling financially, for example, those in which the main breadwinner is unemployed or underemployed, working to support a large number of dependents, or has little income security (e.g., daily labourers), any extra monetary

[5] Those respondents were all members of the Saahasee savings groups; two women explained that they had joined their group only fairly recently, while the other two expressed frustration that they had contributed money over an extended period, but were not given a loan (Random survey interviews #27, 63, 67 and 68)

Table 9.5. Reasons Given for Not Joining Any Organization

Type of Reason	# of Responses*	Percentage
No time	21	18.8
No benefits from joining	11	9.8
Dislike/distrust of leaders or members	18	16.1
Not permitted to join	1	0.9
Not interested	1	0.9
Not aware of any groups to join	13	11.6
No money	47	42.0
Totals	112	100.0

* Respondents in some cases provided multiple responses

commitment could be onerous. It is possible, too, that some respondents have misconceptions about CBOs in general.

Aside from the money issue, a significant percentage of respondents also gave the reason of having no time (19 %) and dislike/distrust of CBO leaders or members (16 %). It is not unexpected that the time commitment is seen as prohibitive by some, especially considering that about two-thirds of respondents are women and many of them already have multiple responsibilities and a long workday. The response of dislike/distrust towards other community members is not a major reason for non-involvement in associations but, nevertheless, indicates a divide in the community.

Collectively, the various community-level organizations in Sultanpuri represent either bonding or bridging relations, depending on the extent of cross-cutting social ties within individual associations. Membership in the majority of CBOs in the study community had an elective basis, which means that, potentially, such interrelationships could span the diverse backgrounds of residents. However, the ascriptive and exclusivist basis of the RSS organization likely represents bonding relations; the women-only *mahila mandal* and savings groups may also represent bonding relations.

9.1.2 Informal Networks

Turning now to informal networks, the random household survey in Sultanpuri included four indicators related to this form of social interaction. The first indicator measures the size of informal networks, as shown in Table 9.6. The overall impression from the data is that informal networks in the community are decidedly small, with over 60 % of respondents

reporting zero persons or no personal network to speak of. Approximately 24 % of respondents stated having one or two persons in their social networks, and 15 % of residents reported three or more persons. For the entire community, the average size of respondents' networks was 0.96 persons.

Table 9.6. Size of Informal Networks

Number of Persons	# of Respondents	Percentage
0	70	61.4
1	19	16.7
2	8	7.0
3	7	6.1
4	5	4.4
5 or more	5	4.4
Totals	114	100.0

These figures suggest an almost anomic level of social interaction in Sultanpuri and, given that informal networks are usually associated with bonding relations, a lack of inter-household bonding social capital. On the surface, such data seem contrary to the qualitative depiction in the literature of the importance of informal networks, generally, in Indian society. Quantitative information on informal networks in low-income urban communities in the country is sparse; however, research by Majumdar (1995) found that network size in two squatter settlements in both Delhi and Hyderabad was typically much larger than in Sultanpuri. For over two-thirds of households surveyed in the two cities, network size was six households or more.

Comparing these results to those in Sultanpuri is misleading however, since Majumdar defined networks differently than I did. Identification of a "network" within the context of a household survey is not a straightforward task (Grootaert et al., 2004); in cross-cultural settings, especially, unfamiliarity or ambiguity around the term on the part of respondents often necessitates an indirect form of query, as in my questionnaire. Majumdar defines a network as "a social field made up of relations between households involved in reciprocal exchange of goods, services, money and for extending mutual assistance and support" (1995; 162), which is similar to Uphoff's definition provided earlier. It is not evident from Majumdar's paper how he measured network size; presumably, his survey instrument solicited information from respondents on the number of households with which they were involved in

a range of reciprocal relations. In the survey I conducted in Sultanpuri, on the other hand, "network" was operationalized in terms of the number of self-reported "close friends" in the community, qualified as "people you feel at ease with, can talk to about private matters, or call on for help," along the lines of the World Bank's SC-IQ. The number of close friends is intended to capture the size of a person's network (Grootaert et al., 2004).

In retrospect, though, I believe that the framing of respondents' personal networks as "close friends" in my survey is too restrictive and, hence, underestimates network size. If a network is conceived as a pattern of social interaction that involves reciprocity in general, its boundaries are likely to encompass a set of people wider than intimate friends, such as more casual friends, co-workers and acquaintances. Nonetheless, despite its shortcomings in capturing network size, this survey question has face value as a measure of the "density" of close friendships, a valid part of the informal social fabric of Sultanpuri. In this regard, considering that over 60 % of respondents say that they do not have any close friends in the community and most are not newcomers (average length of residence in Sultanpuri for all respondents was 17.8 years), the extent of friendships in the community does seem on the low side.

The second indicator, presented in Table 9.7 below, refers to borrowing money from other members of the community. Respondents were asked whether they thought they could borrow a sum of money (Rs. 1000) from their friends and acquaintances in the community (i.e., not from family members, relatives, local moneylenders). Rs. 1000 (about Cdn $ 33.00 at the time) is a significant amount of money to the urban poor in India, the equivalent of about one or two weeks earnings or more. This indicator is intended to gauge the "usefulness" of respondents' networks in times of need (Grootaert et al., 2004), although it could also be viewed as an aspect of cognitive social capital, namely, the norm of generalized reciprocity.

Table 9.7. Borrowing Money from Friends and Acquaintances (Rs. 1000)

Likelihood of Borrowing Money	# of Respondents	Percentage
Definitely	50	43.9
Probably	2	1.8
Probably not	3	2.6
Definitely not	54	47.4
Unsure/Don't know	5	4.4
Totals	114	100.0

Table 9.7 reveals that respondents were fairly evenly split between those who were certain that they could borrow the money (almost 44 %) and those who were sure that they could not (about 47 %).

On the subject of borrowing money, several survey participants expressed comments like "Nobody gives – not even a single rupee."[6] Other respondents lamented the general lack of helping behaviour, as in "If we don't have food, they [the neighbours] won't give" and "Nobody will even give a glass of water."[7] My interpretation of such remarks is that these respondents were perturbed, or perhaps resigned to the fact, that their fellow residents were unwilling, rather than unable, to lend assistance, at least in a material sense. Considering that most households in Sultanpuri were poor, but few were outright destitute, it could have been that some percentage of households had the capacity to lend to others, yet were simply reluctant to do so. Such negative sentiment was not universal, though, since nearly half of respondents were confident that they could indeed turn to other community members. For the community as a whole, it appears that the usefulness of personal networks, with respect to borrowing money, is limited. Money is obviously a key exchange item in the commoditized setting of Delhi, but only one of many. However, I cannot further characterize the functioning of networks in Sultanpuri, as the survey instrument did not inquire about other forms of reciprocity, such as child care, keeping watch over a neighbour's house, job assistance, sharing information, and emotional support. This was another weakness in the questionnaire design.

The third indicator measures sociability, which is operationalized as the frequency of respondents' chatting with other community members. While Grootaert et al. (2004) view sociability as an outcome variable, I look at this mode of interaction as another aspect of structure, that is, a source of social capital. As illustrated in Table 9.8 below, over 62 % of respondents converse with other residents in the settlement on a daily basis. Slightly less than one-third of those surveyed engage in chatting several times a week, while a small percentage of people chat with neighbours only a few times a month. This variable conveys a sense of, in the words of Varshney (2002), the "everyday forms of civil society" that are sometimes overlooked in the academic literature in favour of formal associations. To some extent, chatting and other forms of face-to-face interaction between community members are partly attributable to the physical lay-out of the settlement; living conditions are rather congested

[6] Random survey interviews #44, 80, 81 and 87.
[7] Random survey interviews #83 and 97.

Table 9.8. Chatting Behaviour with Other Residents

Frequency of Chatting	# of Respondents	Percentage
Every day	71	62.3
A few times a week	36	31.6
A few times a month	7	6.1
A few times a year/Never	0	0.0
Totals	114	100.0

and the small houses front onto narrow lanes that, along with domestic chores, child minding and economic activity, are the main venue for social life.

The fourth network indicator assesses the composition of networks as defined by the chatting habits of residents. Respondents were asked to evaluate whether the people they chat with on a regular basis are, as a group, similar or not to themselves, according to a number of social parameters. The data, provided in Table 9.9 below, show that, relative to respondents, networks tend to be heterogeneous (mixed networks), but rarely different along any social category. Network composition is most similar to respondents in terms of religion, gender and neighbourhood (location), and less so along the dimensions of caste, age, place of origin, and income level. Particularly noteworthy is that 97 % of respondents stated that people in their personal networks were from their own neighbourhood, effectively the same lane as themselves. These data suggest that informal social interaction is highly localized in the settlement, with few residents having regular verbal communication with residents from other

Table 9.9. Composition of Social Networks Defined by Chatting Behaviour

	Number of Respondents (Percentage)						
Network Composition Relative to Respondent	Caste group	Religion	Gender	Age	Place of Origin*	Income Level	Neigh-bourhood**
Always the same (homogenous network)	32 (28.1)	68 (59.6)	62 (54.4)	7 (6.1)	18 (15.8)	13 (11.4)	111 (97.4)
Sometimes the same (mixed network)	80 (70.2)	45 (39.5)	52 (45.6)	106 (93.0)	95 (83.3)	95 (83.3)	3 (2.6)
Usually not the same (dissimilar network)	2 (1.8)	1 (0.9)	0 (0.0)	1 (0.9)	1 (0.9)	1 (0.9)	0 (0.0)
Not sure/Don't know	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	5 (4.4)	0 (0.0)
Totals	114 (100.0)	114 (100.0)	114 (100.0)	114 (100.0)	114 (100.0)	114 (100.0)	114 (100.0)

* Place of origin refers to same village, district or state
** Neighourhood refers to same *gali* or lane in the settlement

neighbourhoods or blocks.

Numerous scholars have emphasized the segmented character of civil society in India, which has tended to correspond to major social divisions such as caste, class, gender, and religious affiliation (Drèze and Sen, 2002; Betéille, 1998; Heller, 2000; Sharma, 2002; Serra, 2004). Given this underlying structure, the chatting data for Sultanpuri are suggestive of a more fluid form of social interaction that, according to the Indian literature, is more apt to occur in the urban environment than in the villages (Betéille, 1997; Gore, 2003). Nonetheless, this pattern of interaction refers of course only to chatting behaviour, which is, by definition, casual in nature and cannot necessarily be extrapolated to other areas of social relations. As discussed in Chapter Four, Indian society is evolving in terms of the traditional caste order, but the "loosening" of caste barriers is probably more evident in the public, rather than the private, domain. Thus, the fact that someone converses with a person from a different caste or religious tradition in a public setting like a residential lane does not necessarily mean that the two people can relate on a deeper level, as in bonding relations. Still, the everyday social interaction that is embodied in chatting with neighbours in Sultanpuri, which is cross-cutting to a degree, can be understood as a manifestation of bridging relations across disparate groups in the community, albeit in a limited sense.

9.2 Cognitive Dimensions

Moving to the cognitive component of social capital, the random survey contained several questions intended to capture these intangible aspects which, as posited in theory, predispose groups of people towards acting together for mutual benefit. Within the conceptual realm, trust and adherence to other-regarding social norms, especially, are considered fundamental to the effective functioning of associations and networks (Uphoff, 2000; Putnam, 1993; 2000; Coleman, 1988; World Bank, 2001; Grootaert, 2002).

9.2.1 Trust

Regarding trust, the random survey asked community members whether they felt that most people could be trusted or not, which is a subjective proxy for generalized trust, also referred to as "thin trust" in the social capital literature. As shown in Table 9.10, respondents were fairly evenly split in their answers, with about 46 % expressing that most people could be trusted and 54 % stating that they could not be. These findings are not unexpected, given

Table 9.10. Can Most People Be Trusted?

Personal viewpoint	# of Respondents	Percentage
Most people *can* be trusted	52	45.6
Most people *cannot* be trusted	61	53.5
Don't know	1	0.9
Totals	114	100.0

that generalized trust does not appear to be prevalent in most parts of India (Saberwal, 1996; Gore, 2003).

The data on generalized trust from Table 9.10, which are ambiguous, represent something of a conundrum in terms of social capital theory. On the one hand, generalized trust is widely valued because it is considered conducive to the generation of social capital, particularly bridging and linking relations. Through generalized trust, individuals and groups are able to tap into a larger set of resources that can potentially help them to, in Putnam's words, "get ahead," as opposed to merely "getting by" (2000; 23). On the other hand, though, the sentiment that most people ought not to be trusted could be interpreted, in an uncertain or untrustworthy environment, as rational and prudent. The placement of trust in strangers, or people known only superficially, could well be risky for the urban poor, exposing them to further exploitation. In this vein, the fact that almost half of the Sultanpuri respondents believed that people, on the whole, could be trusted might be construed as overly trusting and not warranted under the circumstances.

Furthermore, theory maintains that generalized trust within the community serves to undergird cooperation; the more abundant trust is, the supposedly easier it is for community members to cooperate (Putnam, 1993). In this respect, the Sultanpuri data suggest a case of opposing forces – residents who, in the spirit of cooperation, are predisposed to trust others, and those who are inclined to hold back. In terms of community-wide endeavors, such as efforts to improve the local environment, the moderate level of generalized trust that exists in Sultanpuri might translate into a potential for residents to act together for mutual benefit, but not something that would be easily accomplished.

The survey also inquired about respondents' level of trust towards certain groups that they, for the most part, would have had direct experience with in the community. As shown in Table 9.11 below, trust levels are high towards other family members and fairly high towards relatives, which is what one would expect given the continuing importance of the institution of

family in Indian society. This is the form of trust that is sometimes referred to in the literature as particularized or "thick" trust. For all other groups listed in the table, though, trust levels are rather low. Overall, the data suggest that the politicians are the least trusted group, followed by the government officials.

Table 9.11. Trust in Specific Groups

How much do you trust...	Number of Respondents (Percentage)						
	Your Family	Your Relatives	Neigh-bours	Your Pradhan	Saahasee (NGO)	Government Employees*	Local Politicians
To a great extent	100 (87.7)	60 (52.6)	50 (43.9)	20 (17.5)	22 (19.3)	21 (18.4)	19 (16.7)
To a small extent	3 (2.6)	25 (21.9)	21 (18.4)	4 (3.5)	5 (4.4)	11 (9.6)	6 (5.3)
Do not trust at all	10 (8.8)	29 (25.4)	41 (36.0)	19 (16.7)	19 (16.7)	47 (41.2)	74 (64.9)
Don't know	0 (0.0)	0 (0.0)	0 (0.0)	56 (49.1)	67 (58.8)	34 (29.8)	12 (10.5)
Refused to answer/ Question not asked**	1 (0.9)	0 (0.0)	2 (1.8)	2 (1.8)	1 (0.9)	1 (0.9)	3 (2.7)
Not applicable	0 (0.0)	0 (0.0)	0 (0.0)	13*** (11.4)	0 (0.0)	0 (0.0)	0 (0.0)
Totals	114 (100.0)	114 (100.0)	114 (100.0)	114 (100.0)	114 (100.0)	114 (100.0)	114 (100.0)

* This category refers to government employees who worked in the study community, that is, service providers like garbage collectors, drain cleaners, parks staff and street sweepers.

** Some respondents were understandably not comfortable answering when the question referred to a person who was sitting nearby, such as a neighbour or pradhan.

*** For residents in one particular neighbourhood of the settlement, this part of the question was not applicable because there was no pradhan in their area.

To elaborate on the trust data from Table 9.11, responses about neighbours are relatively polarized, which is reflective of the complexities of social life in Sultanpuri. Interestingly, all respondents gave an opinion one way or the other, that is, no one replied that he or she "Didn't know." The segment of the community that expressed a great deal of trust towards their neighbours (44 % of respondents) suggests the presence of bonding social capital. To some extent, such relations likely denote ascriptive loyalties associated with concentrations of households in some lanes of the settlement that are of similar ethnic background, such as the

Sikligars[8] in E6. However, in other parts of the settlement that are more heterogeneous, trust between households probably has an element of elective relations or bridging social capital. Since the average length of residence of households in Sultanpuri was close to 18 years, and almost 40 % of households had lived in the settlement since it was established in the mid-1970s, it seems reasonable that particularized trust between some neighbours from dissimilar backgrounds could have developed through face-to-face contact, observation, and common experiences over time.

As far as the faction of the community that had little or no trust towards their neighbours, which was sizable (about 54 % of respondents), several explanations can be offered. Lack of trust might signify simply not knowing other residents well enough or, conversely, it might mean knowing them all too well; at the household level, both scenarios seem likely. Moreover, living in crowded conditions and having to share community facilities and infrastructure could lead to frictions and ill-feelings, which would not be conducive to trust. Apart from that, my sense is that the large percentage of respondents who did not trust their neighbours is related to the high level of crime and violence in the community. Unfortunately for many residents in Sultanpuri, they could not afford to be overly trusting of their neighbours, at least those whom were not known well. In section 11.5 below, I discuss this aspect of the community fabric in more detail.

Similar to the neighbours data, findings about respondents' level of trust towards Saahasee shows a divergence of opinion, but differs in having a high percentage of "Don't knows" (about 59 % of respondents). Since Saahasee had been working in Sultanpuri for only a few years, it is conceivable that many respondents felt they did not know the NGO sufficiently to pass judgment. Of the respondents who did give an opinion, however, about as many have a great deal of trust in Saahasee (19 %) as had no trust at all (17 %). Those who have a lot of trust towards Saahasee may well have participated in the various programs offered by the NGO and formed a positive impression. Alternatively, some residents may not have been directly involved with Saahasee, yet had awareness nonetheless of improvements to community infrastructure and facilities as a result of the NGO's work in the area, which could have been a foundation for trust.

[8] As discussed in the earlier introductory chapter to the study community, the Sikligars are a Sikh caste, notified as a Scheduled Caste in Delhi, whose members originated from the same area of the Punjab and emigrated following Partition, many of them to Rajasthan and later to Delhi.

The lack of trust in Saahasee expressed by some community members and the withholding of trust by the large contingent who responded "Don't know" could have been due to several factors. Several respondents related negative encounters with other organizations in the community in the past, including incidents in which they had been approached by someone soliciting funds on behalf of some cause or other, only to have the person and their money disappear soon afterwards.[9] The limited trust shown towards Saahasee might also be directly related to disapproval of its activities in the community. By way of example, for a number of residents at least, the savings and credit program was a bone of contention; several women complained that they felt "forced" by Saahasee to join the savings groups.[10] In addition, the *modus operandi* of the Saahasee staff could have inhibited the development of trust; the Saahasee staff tended to stay in their on-site office and did not venture out into the community very often, which might have otherwise helped to establish a rapport with local residents. It is possible, too, that caste-, class- and religion-based differences were a constraint to trusting relations, as the majority of community members were SCs/OBCs, lower-class and Hindu, and the senior Saahasee staff generally higher-caste, middle-class and Christian.

With respect to the government employees, trust levels were on the low side; a considerably higher percentage of respondents stated that they had no trust in them (41 %) as compared to those who had a great deal of trust (18 %). The term "government employees," as used in the survey instrument, refers to workers from the different government agencies that provided services in the community and vicinity, such as garbage collectors, drain cleaners, street sweepers and parks staff from the MCD and officials from the Delhi Jal Board. The general lack of trust in government employees is likely rooted in the daily experiences of community members with the various service providers; as described in Chapter Eight, residents of Sultanpuri receive poor quality of service in regards to water supply, sanitation and garbage collection. Apart from problems of limited availability of service (e.g., water supply) and irregularity of service (e.g., drain cleaning, garbage pick-up), maintenance of community facilities and infrastructure is an ongoing problem (e.g., broken hand pumps, blocked drainage system, inadequate care of plants in parks).

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[9] Random survey interviews #15, 23, 45 and 81
[10] Random survey interviews #27, 63, and 67

There was also a sense amongst community members that many government employees did not bother to show up for work, or shirked their duties when they did (e.g., drinking or playing cards on the job).[11] Another sore point for residents was the extortionary practices of some government workers who demanded payment for officially free services (e.g., drain cleaners).[12] At times, relations between certain community members and government employees in Sultanpuri were strained; several residents complained that workers had on occasion been rude to them (and vice versa).[13] As well, it is conceivable that perceptions of respondents about government employees in their community were coloured by the negative stereotype of this category of workers in India; as discussed in Chapter Four, it is widely believed that many government servants, at all levels, utilize their public position for private gain. Thus, government employees working in Sultanpuri might have been "guilty by association," to some degree, rather than by their own actions.

While the survey revealed that trust levels towards government employees are low overall, a significant percentage of respondents (30 %) replied "Don't know." This uncertainty might be related to a lack of awareness among community members about the standards of service to which they were entitled at Sultanpuri. For instance, no one really seemed to know when during the day the municipal water supply would be available in the community or for what duration, or how often the MCD was supposed to pick up the garbage from the community dhalao, or whether maintenance work would be done to fix broken drains. Basic confusion existed, furthermore, over who was actually a bonafide government employee, as workers did not wear uniforms or carry I.D., and it was not uncommon for people in government positions to subcontract their jobs and moonlight elsewhere. The shortage of information and lack of government transparency might make some residents ambivalent.

To remark briefly on the two other groups listed in Table 9.11, respondents had variable levels of trust towards community pradhans and quite low trust towards local politicians. As mentioned earlier, based on my interpretation of quantitative trust data, the local politicians were the least trusted of all the aforementioned groups. The lack of trust in local politicians is, again, not surprising, considering the well-documented cynicism about elected officials in India. In sections 11.6 and 11.7 below, which focus on the pradhans and politicians,

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[11] Random survey interviews #17, 20, 27, 28, 47, 50, 55, 58, 64, 71, 88 and 110; Committee member interviews #3, 9, 15 and 19

[12] Random survey interviews #11, 20, 25, 29, 52 and 61

[13] Random survey interview #25

respectively, I provide additional data that explain the low trust levels towards these two groups.

9.2.2 Solidarity

The norm of solidarity was assessed in the random survey by asking respondents whether they would be willing to contribute voluntary help or money towards a local project that would benefit others in the community, but not themselves personally. The findings, as presented in Table 9.12 below, reveal that a large majority of respondents would be willing to play a role in community projects. About three-quarters of survey participants would be willing to assist through their labour, while over two-thirds would donate a specified amount of money (Rs. 100). As discussed in Chapter Two, the norm of solidarity is deemed important in that it makes cooperation more desirable and, consequently, increases the likelihood of people acting together to achieve a mutual objective (Uphoff, 2000). In this regard, the support for others in the community, as expressed by many respondents, suggests a commonality of interests which,

Table 9.12. Willingness to Contribute Towards Community Projects

Willingness to Contribute...	# of Respondents	Percentage
a) Voluntary help		
Willing to contribute	86	75.4
Not willing to contribute	28	24.6
Totals	114	100.0
b) Money (Rs. 100)		
Willing to contribute	78	68.4
Not willing to contribute	36	31.6
Totals	114	100.0

in turn, represents a propensity for cooperative behaviour and collective action. However, these data should probably be viewed with caution because, it is a general fact of human nature that what people say they are willing to do is not always the same as what they are actually willing to do.

9.3 Social Cohesion

As noted in the earlier theoretical chapter, the term "social cohesion" is used somewhat loosely in the social capital literature, at times synonomously with "integration." In my usage, the term

is more specific and essentially refers to the capacity of the community to "get along," given, or in spite of, its major social differences such as caste, gender, religious tradition, and so on; social cohesion does not mean an absence of social differences. To measure this concept, the random survey asked respondents a two-part question that probed their views about: a) the extent to which social differences, in general, divided their community, and b) whether those differences caused problems. As presented in Table 9.13 below, reactions to this question were mixed. Nearly two-thirds of survey participants (about 65 %) felt that social differences divided their community, either to a great or small degree, with the latter response being the most common. Conversely, though, almost one in five expressed that their community was not at all divided by social differences. As far as the second part of the question, which was applicable only to those having replied that social differences did, indeed, divide the community, almost everyone (72 of 74 respondents) stated that such differences caused problems to a great extent.

Table 9.13. Perception of Community Divisions

Extent to which social differences...	# of Respondents	Percentage
a) Divide the community		
To a great extent	29	25.4
To a small extent	45	39.5
Not at all	21	18.4
Don't know	16	14.0
Refused to answer	3	2.6
Totals	114	100.0
b) Cause problems in the community		
To a great extent	72	63.2
To a small extent	2	1.8
Not at all	0	0.0
Question not asked*	40	35.1
Totals	114	100.0

* Part b) of the question was not asked of respondents who, in part a), had responded "Not at all," "Don't know," or refused to answer.

A second question related to social cohesion asked respondents (i.e., the 74 people who thought that social differences did cause problems in their community) which types of differences were the cause of problems. As shown in Table 9.14 below, differences related to wealth, cited by about 37 % of respondents, was clearly the most popular response. A second

tier of responses included caste (mentioned by 12 % of respondents), gender (11 % of respondents), and education (10 % of respondents). All other types of differences were mentioned by less than 10 % of respondents. Based on the literature about Indian society, the findings from Table 9.14 are not entirely unanticipated. Various scholars have suggested that class, of which wealth or material status is a part, is gradually supplanting caste as the category of social status in the country (e.g., Betéille, 1997; Ali, 2002; Kapadia, 2002; Gore, 2003; Kosambi, 1994).

Table 9.14. Perception of Which Types of Community Differences Cause Problems

Differences related to...	# of Responses*	Percentage
Education	16	10.4
Language	1	0.7
Wealth	56	36.6
Social status	2	1.3
Men and women	17	11.1
Younger and older residents	14	9.2
Caste	19	12.4
Long-term and recent residents	3	2.0
Religion	15	9.8
Political party affiliation	9	5.9
Refused	1	0.7
Totals	153	100.0

* Respondents in some cases provided multiple responses

Although the majority of residents in Sultanpuri are from the lower castes which, traditionally, would have been similarly disadvantaged in terms of material conditions, economic differentiation between and within individual castes is increasing in many parts of the country as a result of education, occupational diversification, government employment quotas, and other factors (Fuller, 1997; Munshi and Rosenzweig, 2005). Thus, it is quite possible that, even among households belonging to the same caste in Sultanpuri, some might be doing perceptibly better than others. Similarly, within a broad caste category such as the Scheduled Castes, some caste groups in Sultanpuri might have advanced further economically than others. One might suppose that, in the context of a resettlement colony established for former squatters, the relative differences in material conditions between households would not be that large; however, as I have discussed in Chapter Seven, the economic status of residents

in Sultanpuri has variability, with a large proportion of households both above and below the poverty line. Certainly, some families are struggling on a daily basis for food and other necessities, whereas the more affluent have a lifestyle that might be characterized as lower middle-class (in the resettlement area, not the squatter settlement).

The data from Table 9.14 are surprising, however, in terms of the low percentage of respondents who cited the response "Differences between Men and Women," especially considering that most of them were women. Given that the Indian literature emphasizes the many forms of gender-based disparity in the country (e.g., access to education and health care, labour force participation, property ownership, domestic roles), I would have assumed that this type of social difference would figure more prominently in respondents' views. Furthermore, as I discuss in section 11.5 below, survey findings also suggest that gender-based violence is widespread in the community, which is a palpable manifestation of women's disadvantaged position. As such, it seems puzzling that relatively few respondents expressed that gender was one of the types of social difference that divided their community. Then again, the fact that gender did not come to mind readily for most respondents might be explained in terms of the deeply ingrained nature of patriarchal ideology.

With respect to religious affiliation, slightly less than 10 % of respondents regarded this type of social division as a contributing factor to problems in Sultanpuri. The composition of the study community is about four-fifths Hindu, one-fifth Sikh, and a small proportion of Muslims. The low percentage of survey participants who mentioned religious differences could be interpreted as a sign of relative communal "peace," in light of the historic conflict between the various groups that goes back at least as far as Partition in 1947 and, more recently, the 1984 riots that broke out in Delhi following the assassination of Indira Ghandi by two of her Sikh bodyguards. During the 1984 riots, violence perpetrated by Hindus against Sikhs, in which the police participated and certain politicians probably orchestrated, took place in a number of blocks in Sultanpuri and resulted in over one hundred fatalities and extensive property damage. It seems that, according to historical records, the study community itself was spared of bloodshed at the time. Although I did not actively investigate this particular period in Sultanpuri's past as part of my fieldwork, a couple of longstanding community members spoke about the 1984 riots and of hiding Sikh neighbours in their houses to protect them.[14]

[14] Random survey interview #104; Pradhan survey interview #3

During the period of my fieldwork, there did not appear to be any overt conflict between the Hindus, Sikhs and Muslims in the study community. Indeed, a few respondents commented about local residents celebrating the festivals of other religious affliliations,[15] although this is common in India. Despite the absence of hostilities, though, it would be an overstatement to describe relations between the different religious groups as truly harmonious. After all, the Sikligar households (Sikhs) were geographically concentrated in E6, essentially an ethnic enclave, and interaction between the tightly-knit group and the rest of the community was, on the whole, limited. Genuinely harmonious relations, on the other hand, would imply, at a minimum, not only the absence of conflict, but also a level of ongoing interaction across the different traditions in the form of bridging social capital; in Sultanpuri, the informal network data suggest a degree of casual interaction across religious groups that is probably better understood as co-existence rather than inherent accord. Referring back to the empirical research by Varshney (2001; 2002) about Hindu-Muslim conflict in Indian cities, the upholding of communal (religious) peace in India is often precarious. If Varshney's argument is correct – that communal conflict is kept in check better in those cities which have robust associational as well as informal ties between different religious groups – then Sultanpuri would seem to be not particularly immune from strife in future.

As mentioned above, a number of survey participants responding to the question about social differences said that there were none within the community (about 20 % of respondents). Several respondents made comments to the effect that they were united in poverty, such as: "Everyone is the same here – poor" and "In the poor people, you won't find differences."[16] One resident compared the aspect of social difference in the community to the rural context: "We are all the same in Sultanpuri – in the village, you find more differences."[17] Such sentiment, though, appears to have been the minority view. Even so, it could be argued that, on the basis of the data in Table 9.14, the study community is somewhat cohesive insofar as respondents did not identify in overwhelming numbers any specific social differences as causing problems. It would appear that there were not, apart from wealth, any major social rifts at the time; community members deemed ascriptive differences, such as caste, religion and gender, as relatively insignificant.

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[15] Committee member interview #3; Pradhan survey interview #1

[16] Random survey interviews #16, 17, 28, 34, 39, 50, 81 and 97

[17] Random survey interview #39

I relate social cohesion to the structural underpinnings of the community (i.e., a source of social capital), notwithstanding that some analysts regard the construct as an outcome. As such, the impression of a moderate amount of social cohesion in Sultanpuri suggests that the community has some potential for acting together or, at least, does not face major barriers to collective action, given the numerous social differences. Admittedly, though, social cohesion is not an easy concept to measure within the context of a household questionnaire. My survey questions inquired about social differences and associated problems yet, obviously, did not explore the idea of social cohesion in depth; in the more precise sense of the term, social cohesion encompasses *how* a community or society accommodates social differences and resolves conflict, issues that the random survey did not address.

9.4 Customary Community Engagement and Political Action

Variables related to community engagement and political action are generally regarded in the empirical work as outcomes of social capital (Grootaert, 2002; Grootaert et al., 2004; Narayan and Cassidy, 2001). A third variable that I discuss, personal empowerment, is alternately treated as outcome of social capital and an indicator of human capital.

9.4.1 Customary community engagement:

Customary community engagement refers to informal, everyday activities that take place in the neighbourhood or community and are, generally speaking, for the common good; such action can be motivated out of self-interest or the welfare of others, or else a combination of both. In Sultanpuri, traditional or customary participation in community life is non-associational in nature, in contrast to the community organizing undertaken under the auspices of the PLUS Project. Because of the non-associational aspect, I do not characterize the customary forms of community engagement as "civic engagement" which, in the literature, usually means associational activity. Customary community engagement in Sultanuri is indigenous, in the sense of having existed prior to, and independently of, the PLUS Project; while the PLUS Project established a number of CBOs to help meet community needs and address common concerns, the customary forms of engagement were ongoing. To find out about customary forms of engagement, the random survey posed a series of questions about the extent of household participation in informal community activities, types of activities, and which household members were involved.

The first survey question inquired whether the respondent, or members of the respondent's household, had been involved over the past year in any community activities, defined as "activities for the benefit of the community," excluding participation in the PLUS Project. As shown in Table 9.15 below, 49 households (43 % of households surveyed) participated in some type of community activity within the past year, and the other 65

Table 9.15. Household Participation in Community Activities

Participation during past year	# of Households	Percentage
Yes	49	43.0
No	65	57.0
Totals	114	100.0

households (57 % of households surveyed) did not. Respondents from the 49 households that participated in community-oriented activities were subsequently asked to identify the type of activity, as presented in Table 9.16 below. In some instances, households were involved in two or more activities; the average number of community activities per household was 1.2. The most common form of community participation, in which 19 households participated, related to maintenance of local facilities and infrastructure, such as cleaning drains in front of houses. The second-most popular activity, representing 16 households, was monitoring of community facilities. Generally, the monitoring role referred to households situated around the parks that

Table 9.16. Types of Community Activities in Which Households Participated

Community activity	# of Responses*	Percentage
Monitoring community facilities	16	26.2
Maintaining community facilities	19	31.1
Collecting garbage in community	6	9.8
Awareness generation	12	19.7
Cultural and social activities	8	13.1
Totals	61	100.0

* Respondents in some cases provided multiple responses

kept an eye out for people who might be using the area to dump garbage or as an open-air toilet; several respondents also spoke about monitoring open spaces for drug-related or other suspicious activity.

The third-most common type of community engagement, undertaken by 12 households, was awareness generation, which meant encouraging neighbours to keep the common area of

the lane neat and tidy by, for example, sweeping in front of houses and disposing of garbage in the *dhalao* (community garbage facility). Additionally, six households reported collecting garbage from parks and open spaces. Another eight households participated in cultural and social activities, including helping to build a temple in the community and volunteering with the handicapped.

Respondents from the 49 households that had been involved in community activities were also asked to identify which of their household members were participants. The profile of participants, by household position and gender, is provided in Table 9.17 below. Because several households had more than one member who was active, the total number of participants was 53. The data show that heads of households and spouses were the main participants, accounting for a combined 45 of the 53 persons involved in community activities. Slightly more than half of participants were female. The largest group of participants, representing 22 individuals, was female spouses, and the second-largest group, with 15 persons, was male heads of households.

Table 9.17. Who Participated in Community Activities By Household Position and Gender

Household Position	Male	Female	Totals	Percentage
Head of Household	15	7	22	41.5
Spouse	1	22	23	43.6
Children (teens or adults)	4	0	4	7.5
Other adult members	2	2	4	7.5
Totals	22	31	53*	100.0

A number of respondents from households that informally maintained or monitored community facilities and infrastructure provided extra information about their efforts to deter inappropriate behaviour of fellow residents, especially the indiscriminate dumping of garbage and open-air toileting. One fellow from the squatter settlement, for example, explained that when he sees his neighbours putting garbage in the drain, he throws it in front of their houses.[18] Several residents from the resettlement area, however, expressed that it did no good to intervene when others misused the facilities, or related difficulties regarding the verbal sanctioning of community members.[19] One woman, for example, reproached a group of

[18] Random survey interview #112
[19] Random survey interviews #18, 21, 25, 72 and 93

teenagers for taking bricks from the walkways in Hazari Park, to which they responded: "This is a government park – we can do whatever we want." After that, the woman said that she didn't bother.[20] Other respondents were apprehensive or fearful about confronting community members; a man who lived in a house facing Hazari Park, upset about the area being used as a latrine, told us: "If I say anything, people will come and beat me."[21] Apart from these anecdotes, various comments of respondents in reference to the part of the random survey that covered environmental facilities and conditions, as well as interview data from the environmental committee members, attested to the existence of tensions in Sultanpuri, at times leading to arguments and physical fights, around the everyday use of community facilities.[22]

The conflict over the use of community facilities implies, of course, both the presence of social norms around the use of such facilities and informal attempts to discourage inappropriate behaviours through sanctions. In Sultanpuri, it would appear that negative sanctions, even mild verbal rebukes, were only weakly accepted in the community which, according to social norm scholars, makes it difficult to uphold norms (Horne, 2001). This tendency is consistent, further, with the prevailing theory which argues that social norms, in general, are apt to be less robust in large urban areas, as compared to smaller communities comprised of longstanding residents; the reason is that personal reputation is usually less important and sanctioning is less effective (Cook and Hardin, 2001). Unless norms are maintained through group-based sanctions, which entails a socially defined right for group members to enforce sanctions or, alternatively, norms have been internalized by members, application of sanctions by a few individuals and not others can lead to a situation of "heroic sanctioning," whereby the few bear an inordinate cost (Horne, 2001). The evident reluctance of some community members in Sultanpuri to levy sanctions on others in conjunction with misuse of the local facilities could be interpreted as a situation of heroic sanctioning, that is, as risky, and, hence, norms are not that influential.

Looking at the types of community engagement undertaken in Sultanpuri, a few general observations can be made. First, all of the activities shown in Table 7.16, with the exception of the cultural and social category, revolve around managing the physical environment, that is, the community infrastructure, facilities and open spaces; the environmental-oriented activities,

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[20] Random survey interview #18
[21] Random survey interview #25
[22] Random survey interviews #17, 18, 21, 23, 25, 33, 59, 60, 71and 92; Committee member interviews #4, 7, 8, 9, 20 and 28; Saahasee (2003b)

combined, account for about 87 % of the total customary engagement. Secondly, based on the description of activities provided by respondents, the nature of the environmental-oriented activities is informal and ad hoc, part of the daily routines of a segment of residents in the community. Thirdly, and again derived from respondents' characterization, such efforts were typically carried out by individuals or households, rather than a group of households working collectively. In fact, none of the respondents portrayed their particular activity as part of a coordinated or planned effort between like-minded neighbours; although a number of households on their own, for instance, collected garbage from common spaces or monitored the use of the large park, there were no reports of, say, clean-ups at the lane level or anything comparable to a "neighbourhood watch."

The reliance on individual or household initiative in the customary management of shared facilities and the local environment signifies, according to Uphoff (2000), that the norm of cooperation, an important dimension of cognitive social capital, is not particularly strong in Sultanpuri. Community members, in other words, were not inherently predisposed to act together for the common good, at least as far as day-to-day management of their physical surroundings. Uphoff (2000) contends that the fundamental reason why individual action would be favoured over collective solutions to community-level problems is the expectation that the latter approach will not occur or be successful. This expectation would, presumably, be rooted in prior experience and the history of the community; while the actions of individual residents in Sultanpuri show a sense of "community mindedness," insofar as collective action is correlated with social capital, the relative lack of customary forms of collective action suggests that social capital is not intrinsically high.

9.4.2 Political action:

Political action in Sultanpuri was primarily oriented towards lobbying government officials and local politicians for better infrastructure and services in the community. Data were obtained about three types of politically-oriented activities: petitioning, protest demonstrations, and voting. Like the preceding forms of community engagement, all of the political activities were customary, having existed before the PLUS Project. In the thinking behind the World Bank-designed household questionnaire, political engagement at the community level is regarded as a form of collective action and, hence, a consequence or outcome of social capital (Grootaert, 2002; Grootaert et al., 2004; Narayan and Cassidy, 2001). I concur with this basic

conceptualization, with the qualification that different forms of political action likely embody different degrees of collective action and, by extension, social capital. In the ensuing discussion, I look at the level of participation in the various activities, identify which segment of the community was involved, and make inferences about social capital from the kind of collective action entailed.

Beginning with petitions, respondents in the random survey were asked whether they or their household members had written or signed a petition to government service providers or politicians about a neighbourhood or community issue, also within the last year. Petitions, locally called "applications," are a fairly common way for groups in Delhi to try to get their voice heard and influence the decision-makers. As shown in Table 9.18, about one-third of households in Sultanpuri had been involved with petitions. Respondents informed us that various petitions had been circulated about the following concerns: water supply, drain

Table 9.18. Household Participation in Petitioning

Initiated or signed petition	# of Respondents	Percentage
Yes	37	32.5
No	77	67.5
Totals	114	100.0

cleaning and repair, park maintenance, garbage collection, electricity service, abandoned houses, road speed breakers, and local crime.[23]

Table 9.19 provides the composition of community members, by household position and gender, who participated in petition-making. Similar to the data on customary community engagement, the main participants were the heads of households and spouses, and the number of females was marginally higher than the males. The level of participation of children (teens

Table 9.19. Who Participated in Petitioning by Household Position and Gender

Household Position	Male	Female	Totals	Percentage
Head of Household	9	5	14	37.6
Spouse	1	13	14	37.6
Children (teens and young adults)	6	3	9	24.6
Other adult members	0	0	0	0.0
Totals	16	21	37	100.0

[23] Random survey interviews #17, 23, 25, 29, 37, 41, 47, 62, 68, 69, 71, 87, 104 and 112

and young adults) in petitioning, at 25 %, is noticeably higher than in customary community management (7 %, from Table 9.17 above), which might be a function of the need for literacy in the former activity and instances in which children are more literate than the parents. In this vein, a couple of respondents told us that they had asked their children to write petitions (because they could not do so themselves).[24]

In terms of what can be inferred about community petitioning, as a form of collective action it is representative of social capital; however, because the activity is essentially one-off or sporadic and ordinarily involves limited social interaction and cooperation, it is not necessarily indicative of a high level of social capital. I did not systematically collect data on the effectiveness of community petitioning (e.g., how responsive government officials or politicians were) but, given the ongoing problems with infrastructure and services in Sultanpuri, it was probably not that successful. In this vein, several community members said to us, in effect, that they were fed up with signing petitions and the lack of government action.[25] It could be argued, moreover, that the petitioning was fundamentally reactive to particularly "bad" situations in the community and, as such, would not likely address systemic causes of poor-quality infrastructure and services in low-income settlements like Sultanpuri.

Members of the community had also participated fairly recently in protest demonstrations, the second type of political engagement, to get the attention of government service providers and demand action around water supply and sanitation issues. Information about protests was obtained through interviews with water committee members and Saahasee.[26] During the summer of 2002, several hundred residents from the study community and the adjacent F-block in Sultanpuri, accompanied by local politicians, marched to the area DJB office on two occasions to protest water supply droughts that had lasted for several days at a time. Apparently, rainfall was minimal that year and water levels of the Yamuna River, the main source of potable water in Delhi, had been low. The demonstrators were made up mostly of women, with some men and children; many women carried their earthen pots and other water vessels for dramatic effect and, apparently, stone-throwing and much shouting took place at the government office. It is not clear whether the protests actually spurred the water agency to take action; DJB officials told community members that there was a city-wide problem of water availability.

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[24] Random survey interview #23 and 104
[25] Random survey interviews #17, 86 and 87; Pradhan interviews #4 and 7
[26] Committee member interviews #1 and 2; Saahasee (2003c).

The following year, in 2003, residents from the study community did not mount any protests over water because the supply was reputedly better that year; however, that summer a small group of about 12 to 15 women protested at the local DDA office about the poor state of their drains. As far as the relevance to social capital, the protests over water supply and drains, like petitioning, are basically a one-off form of collective action yet, nonetheless, attest to group solidarity and a coordinated response in the face of a crisis or urgent situation. As Grant (2001) proposes, since protests would usually be a last-ditch strategy, to be utilized when no other options are available, the occurrence of protests is probably indicative of a lack of linking social capital, in this case, regular lines of communication with the government service providers and the capacity to influence them through conventional means. Furthermore, the protests can also be interpreted as a lack of macro-level social capital or, in Woolcock's framework, institutional integrity, in that the deficiency of public services led people to demonstrate en masse.

Voting in formal elections, the third type of political action for which data were collected, is generally thought of as an outcome variable that is positively related to the stock of social capital at the community level (Grootaert, 2002; Grootaert et al., 2004). The random household survey asked respondents whether they had voted in the most recent election, that being the Delhi municipal election held in March 2002. As shown in Table 9.20 below, voter turnout in the community was 86 %; this figure includes community members who had a voter's I.D card and voted (78 % of respondents) plus a small number who managed to vote

Table 9.20. Voting in Most Recent Election

Voting Behaviour	# of Respondents	Percentage
Has voter's card and voted	89	78.1
No voter's card, but voted	9	7.9
Has voter's card, but did not vote	5	4.4
No voter's card and did not vote	11	9.6
Totals	114	100.0

despite not having a voter's card (about 8 % of respondents). As the voter's card is officially required in order to vote, it is not known how some community members were able to get around this. Given that the city-wide turnout in the 2002 Delhi election was 42 %,[27] the

[27] Times of India. 2002. "42% polling for Delhi Municipal Elections." *Times of India* (Mar 25). Accessed online on Jul 7, 2007 at: http://timesofindia.indiatimes.com/articleshow/4801487.cms

community turnout of 86 % is remarkably high. One would think, though, that the figure of 86 % is probably inflated, to some extent, by respondents who did not actually vote, but wanted to present themselves in a positive light.

Considering the nature of political culture in India, even if voter turnout in Sultanpuri was something less than 86 % but still well above average, this does not simply equate with a high level of social capital. According to Saahasee and community residents, the "vote bank" phenomenon, which is well-documented in the Indian literature, was ensconced in Sultanpuri.[28] Given these circumstances, the strategy of casting votes in a block, while it is collective action at the community level, occurred within the context of political clientelism, a form of unequal vertical relations that Putnam and others consider unhelpful, ultimately, to the inculcation of horizontal-level social capital across societies. In addition, the vote bank strategy could be viewed as another one-off type of collective action, not unlike the petitions and protests, since it takes place only once every few years around election time and does not require sustained interaction and cooperation between community members.

9.4.3 Personal empowerment:

Turning now to personal empowerment, the random survey queried respondents on this concept, operationalized in terms of the perception or belief that one has rights and power to effect changes in one's life. Although the designers of the World Bank questionnaire conceptualize personal empowerment as an outcome of social capital, the theoretical connection, in my estimation, is not well-established. Like Narayan and Cassidy (2001), I prefer to treat the variable as a determinant, since it more obviously pertains to human capital and sense of personal efficacy; as such, empowerment can be understood as indicative of a propensity for action, whether individually or collectively. The responses to the personal empowerment question, provided in Table 9.21 below, show a marked divergence of opinion in the community, with the number of people feeling totally powerless to make changes in their lives (34 % of respondents) outnumbering those who consider themselves totally powerful (18 % of respondents); the remainder of respondents were somewhere between the two extremes.

[28] Saahasee (2003c); ADD REFS from community members

Table 9.21. Personal Empowerment

Perception of Self	# of Respondents	Percentage
No rights, totally powerless	39	34.2
Very few rights, almost powerless	16	14.0
Some rights, somewhat powerless	15	13.2
Most rights, mostly powerful	22	19.3
All rights, very powerful	20	17.5
Don't know	2	1.8
Totals	114	100.0

My impression of the data in Table 9.21 is that the community has a reservoir of personal empowerment or individual-level agency within the community, which might lend itself to collective action (or individual action), but this aspect of human capital is clearly not in abundance. A more optimistic yet plausible interpretation, though, is that more than one-third of respondents in Sultanpuri have a quite positive perception of their capacity to effect change (i.e., the "mostly powerful" and "very powerful" groups); these people, given the opportunity to act as role models or leaders within the community, are potential catalysts for positive change and, therefore, represent human capital that could in future contribute to the generation of social capital.

9.5 Anti-Social Behaviours

Along with pro-social (i.e., other-regarding) norms and behaviours, life in Sultanpuri features various forms of conduct that would be commonly thought of as anti-social (i.e., other-denying or of a criminal nature). The latter behaviours are indicative of underlying issues in the study community that are related to gender relations, poverty, unemployment, health, and conflict management, among others. For the purpose of my research, however, I look at anti-social behaviour not so much to understand its causation but, rather, to draw out its implications for local social capital. Accordingly, to get a sense of the "darker side" of the community fabric, the random survey probed respondents about the following issues in Sultanpuri: domestic abuse, sexual harassment, theft, vandalism, alcoholism, illegal drugs, and physical fighting involving men and boys; more specifically, respondents were asked whether these types of behaviours were a "big problem," "small problem," and "not a problem" in the community. The question was worded, moreover, so as to elicit a response about the settlement as a whole,

rather than the respondent's own household or family.[29] The corresponding data are provided in Table 9.22 below.

Table 9.22. Perception of Anti-Social Behaviours in the Community

Perception of Problem	Number of Respondents (Percentage)						
	Domestic Abuse	Sexual Harrassment	Theft	Vandalism	Alcohol Abuse	Illegal Drugs	Men/Boys Fighting
Big problem	64 (56.1)	61 (53.5)	87 (76.3)	74 (64.9)	62 (54.4)	67 (58.8)	70 (61.4)
Small problem	9 (7.9)	9 (7.9)	4 (3.5)	8 (7.0)	11 (9.6)	5 (4.4)	12 (10.5)
Not a problem	10 (8.8)	20 (17.5)	6 (5.3)	10 (8.8)	11 (9.6)	1 (0.9)	8 (7.0)
Don't know	16 (14.0)	11 (9.6)	5 (4.4)	8 (7.0)	8 (7.0)	16 (14.0)	10 (8.8)
Refused/Not asked[1]	15 (13.2)	13 (11.4)	12 (10.5)	14 (12.2)	22 (19.3)	25 (21.9)	14 (12.3)
Totals	114 (100.0)	114 (100.0)	114 (100.0)	114 (100.0)	114 (100.0)	114 (100.0)	114 (100.0)

[1] Some respondents were fearful or otherwise reluctant to answer parts of this question, especially concerning illegal drug use, when neighbours, unfamiliar people or children were in close proximity

The overall message from the table is that anti-social behaviour is of considerable concern to many residents of Sultanpuri. All of the behavioural categories were regarded by a majority of respondents as "big problems" in their community, some more than others; only a small percentage of those interviewed felt that there was no problem. It is also apparent from Table 9.22 that quite a few respondents responded "Don't know," refused to answer, or the question was not asked. As discussed in the earlier methodology chapter, my field assistants and I refrained from asking the question altogether, or parts of it, depending on circumstances; some respondents were visibly ill at ease with the subject, a few were being scolded by family members to not reply and, in some instances, young children were present. We also avoided

[29] Asking about anti-social behaviours in this way might be viewed as suggestive, in comparison to open-ended questions like "What kinds of social problems are there in your community?" However, I experimented during the pre-test stage with similar open-ended questions about environmental issues in the community, and found that this approach did not elicit a good response: respondents were generally not able to verbalize problems. Given the sensitive nature of most of the anti-social behaviours, I believe that the great majority of respondents would not have broached these topics on their own. Therefore, I utilized a more direct form of inquiry whereby the various behaviours of concern were raised with respondents, to which they were asked, in effect, to characterize the extent of the problem in the community in general; respondents were not asked to comment on their own situation in particular.

parts of the question that might have seemed confrontational to respondents, such as when we had knowledge beforehand that the person being interviewed or a family member was allegedly involved in criminal activity. Nevertheless, the sensitive nature of this question, more than any other in the survey instrument, made some respondents anxious or fearful.[30] As such, my field assistants and I made concerted efforts to minimize the potential risk to survey participants, including informing them of their right to refuse to answer any question as well as several strategies employed during the course of interviews to ensure confidentiality.

Turning now to specific anti-social behaviours listed in Table 9.22, the data suggest that violence against women is widespread in Sultanpuri. About 56 % of survey participants reported that domestic abuse was a big problem, with only 9 % stating that it was not a problem; for reasons noted above, a fair percentage of responses were "Don't know," refused to answer, or the question was not asked. A couple of respondents stated that domestic abuse occurred in "most" households in the community.[31] Although the questionnaire did not probe about the personal lives of respondents, a number of women voluntarily disclosed that their husbands were beating them and, in some instances, their children also.[32] Frequently, the abuse followed upon husbands drinking alcohol. One woman told us that when her husband arrived home drunk and in a foul mood, she fled with her children to spend the night in the park; she also said that other women in her neighbourhood, in the same predicament, escaped to the roofs of their houses.[33] Another unfortunate woman told us that her husband had broken her front teeth and threatened her with a knife; yet another confided that her husband forced himself sexually on her in front of her small children.[34] Elderly people, too, were subject to domestic abuse; one old woman whom we interviewed told us that her son and daughter-in-law were beating her.[35] Of course, domestic abuse, as I have defined the term in Chapter Four, implies more than physical violence (e.g., verbal cruelty, over-work, neglect, confinement, abandonment), yet respondents predominantly focused on beatings.

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[30] When interviewed privately, survey participants usually did not have difficulty and were forthcoming in their replies; however, many of interviews took place in the busy laneways of the settlement, often with family members, neighbours and unfamiliar people around. At times, interviews were conducted with as many as twenty onlookers, which was off-putting, understandably, for some respondents.
[31] Random survey interviews #21 and 23
[32] Random survey interviews #13, 22, 53, 81, 83, 87
[33] Random survey interview #83
[34] Random survey interviews #22 and 87
[35] Random survey interview #52

Given that domestic abuse, according to the literature, is pervasive in India and affects all segments of society (Srivastava, 2001; Karkelar, 2004; Seth, 2001), the Sultanpuri data are not unexpected. However, considering that there is a traditional stigma or shame attached to wife beating in the country (for the wives, primarily), I was surprised that several women spoke openly of their own situation in front of strangers such as me. I could not, of course, ascertain through random survey the actual extent of domestic abuse in the study community; nonetheless, my assessment of the problem, which is based on the qualitative perceptions of respondents, is that a substantial proportion of households are affected. Domestic abuse has implications for human capital as well as social capital in the community. Obviously, violence in the home has profound impacts on the victims, including physical injury, psychological harm, medical expenses, lost productivity and reduced quality of life; children, even when not directly abused, are also hurt. From the standpoint of social capital, these effects serve to diminish the reservoir of human capital that is potentially available for the creation of social capital in Sultanpuri. As a consequence of domestic abuse, the involvement of women, especially, in the life of the community is diminished. Furthermore, insofar as bonding social capital within the family structure can be viewed as a foundation from which to develop bridging relations, domestic abuse is destructive.

Another gender-related issue in the community pertains to sexual harassment of women and girls. The data on sexual harassment in Table 9.22 are similar to that for domestic abuse, with about 54 % of survey participants rating it as a big problem; however, the proportion of respondents who felt that it was not a problem was higher (18 %). During my research, as noted in Chapter Eight, I became aware of two public places, in particular, where females were exposed to harassment. The first was the community toilet block where incidents had occurred of men bothering women and girls.[36] The second locale was the parks, which the female teenagers tended to stay away from on account of teasing, lewd comments, and other unwanted attention that they received there.[37] One community pradhan told us that he had stopped sending his two daughters to school in the area because of sexual harassment.[38] Several respondents also said that incidents of rape had occurred in Sultanpuri.[39]

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[36] Saahasee (2003b)
[37] Random survey interview #72; Committee Member interview #19 and 23
[38] Pradhan survey #7
[39] Random survey interviews #3, 23 and 104

Like domestic abuse, sexual harassment has detrimental consequences for human capital and social capital in Sultanpuri. Regarding the latter, acts of sexual harassment and assault, or fears thereof, constrains female freedom of movement and, consequently, opportunities for social interaction and engagement in the community. Domestic violence and sexual harassment are, in other words, forms of discrimination against women and girls that contribute to their exclusion from full participation in society.

In terms of theft and vandalism, the data in Table 9.22 show an even higher level of consensus (76 % and 65 % of respondents, respectively) that such acts are big problems in the community. Residents informed us during the random survey that any personal property, even the water taps in front of their houses, was liable to being stolen. One man gave a sense of the pervasiveness of the problem, lamenting that "If I have only dust and garbage outside of my house, they [thieves] will steal that also."[40] Pickpocketing, too, was apparently common, especially on crowded buses.[41] It would seem that theft in the area had an organized, aggressive element as well; by way of example, groups of four or five men, with scarves over their faces and carrying knives or razor blades, had made brazen attacks on local people in the street, taking their jewelry, wallets, and other items.[42] What is more, theft in the community was not entirely of the "petty" variety. A local resident informed us about large-scale heists of government property; apparently, employees of the Delhi Vidyut Board (electricity utility) conspired with local drug addicts for them to steal large quantities of wiring and other materials from a nearby house that was used as a go-down (warehouse), after which the take was divied up.[43]

Much of the infrastructure and facilities in the community has been damaged by vandalism, including some relatively new additions. As documented in Chapter Eight, handpumps had been broken, metal hardware and doors had been removed from the community toilet block, and the gate to the dhalao (waste facility) was missing; both the toilet block and the dhalao were only a few years old. In the large park, benches had been taken to several lanes, a lot of bricks had been removed from walkways and the amphitheatre that had been recently constructed through the PLUS Project, gate padlocks were broken; plants had been damaged and playground equipment had disappeared. Also, in the park, public lighting

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[40] Random survey interview #9
[41] Random survey interview #23; Saahasee (2003d)
[42] Random survey interview #30; Saahasee (2003d)
[43] Committee member interview #17

had been knocked out, which several residents claimed was a deliberate act so as to keep the area dim after dusk and thus provide better cover for illicit activities.[44]

Crime data have been utilized by researchers as a key indicator of the level of social capital in various locales (Twigg and Schecter, 2003). The social capital literature posits a strong, inverse relationship between the level of crime and violence in a community and its stock of social capital (Putnam, 2000; Field, 2003; Halpern, 2005; Moser, 2004; Moser and Holland, 1997; Snoxell et al., 2006). Crime-affected neighbourhoods, particularly where violence is involved, are associated with lower levels of trust, social connectedness, informal social controls, and feelings of commitment to the area; the depletion of existing social capital can generate, to use Putnam's phrase, a vicious cycle of even more crime and further erosion of social capital (Putnam, 2000; Moser and Holland, 1997; Halpern, 2005). From a theoretical standpoint, then, the main implications of theft and vandalism in Sultanpuri are an increase in public insecurity and a decrease in generalized trust. Fear of being robbed and attacked would, to some extent, constrain the freedom of movement of residents in Sultanpuri and, consequently, opportunities for social interaction. Thus, some individuals might be reluctant to use the streets and community facilities, or to attend a public meeting, especially after dark. Particular groups that might feel more vulnerable, such as women and the elderly, would likely be more apprehensive about the threat of crime and, consequently, more apt to withdraw from community life.

Notwithstanding that urban crime is a complex phenomenon encompassing individual-, family-, community- and macro-level dimensions, the "broken window" thesis (Wilson and Kelling, 1982; Kelling and Cole, 1996; Crawford, 2006), an influential school of thought that focuses on community-level factors, may be relevant to Sultanpuri. The thesis argues that the physical conditions of a neighbourhood or community are instrumental in encouraging or discouraging delinquent and criminal behaviour; urban areas that have obvious signs of disorder, including vandalism, abandoned housing and graffiti, are susceptible to criminal invasion because such disarray signals to potential offenders, in effect, that "nobody cares" (Wilson and Kelling, 1982; Crawford, 2006). Signs of physical disorder can communicate that a neighbourhood is unguarded and local inhabitants unwilling or unable to maintain public order and safety (Villarreal and Silva, 2006; Crawford, 2006). Evidence of social disorder, moreover, such as drug use, alcoholism and prostitution, tends to convey a similar message

[44] Random survey interviews #72, 80 and 104

(Wilson and Kelling, 1982; Villarreal and Silva, 2006). From this perspective, it is conceivable that Sultanpuri, which has multiple signs of both physical and social disorder, could transmit this impression and thereby attract more criminal activity.[45]

Illegal drugs and alcohol appear to be especially vexing social concerns in Sultanpuri. As far as drugs, close to three-fifths of respondents in the random survey stated that it was a "big problem" in their community; only one person felt that drugs did not pose a problem and another five considered it a "small problem." Compared to all other anti-social behaviours listed in Table 9.22, the issue of drugs produced the highest proportion of "Don't know" and "Refused/Not asked" responses (14 % and 22 % of respondents, respectively). From the body language of respondents and other clues, I would venture that most of the "Don't know" responses to this question, specifically, actually represented a refusal to answer, which signifies an even larger unwillingness to disclose information. Since the great majority of respondents would have been, in my view, aware of the drug situation in the community, the relative lack of response on the subject could be interpreted as implicit acknowledgement of the problem. This reluctance, I believe, was related to a common anxiety around drug activity (of others) although, in some instances, respondents may have declined answering because they or their fellow household members were themselves involved.[46]

While it was not my intention to investigate deeply into the drug situation in the community, I did learn about a few of its dimensions from information provided by residents and Saahasee. In Sultanpuri, male youth were the primary group of drug users, known locally as "smackies;" the name derives from "smack," the street name for an impure form of heroin that was the most commonly used narcotic in the community. It seemed that drugs were readily available in the community, even being sold from vendors' carts during the day. The main reason given for local drug use was a widespread sense of frustration related to unemployment and under-employment. The dealers who operated in the community comprised local residents and possibly outsiders; several respondents told us that the local people who were dealing tended to be among the more educated; from the educational data obtained through the random survey, the "more educated" would be graduates from secondary school and university-level programs. Perhaps the worst aspect of the drug scene in Sultanpuri was

[45] Further explanation of the broken window thesis is provided in Appendix C.

[46] During a number of interviews in the random survey, respondents voluntarily divulged that family members (usually husbands) were drug addicts; in other instances, respondents did not reveal any personal or familial involvement with drug-related activities, but my field assistants and I had some prior knowledge of their involvement.

that children as young as ten years old were being given drugs free of charge to get them addicted and subsequently "schooled" to steal from their parents so that they would become paying customers in future.[47]

Drug-related activity in the community had a spatial component; as noted in the previous chapter, much of the goings-on occurred in public spaces such as parks, abandoned houses, and the property around the toilet complex, especially after dusk. In addition, from comments made during the random survey, there appeared to be pockets or concentrations of households within the residential neighbourhoods that were involved in drugs, either as users or dealers; several respondents in the resettlement area told us that theirs was a "good lane" or "bad lane" during interviews.[48] The squatter settlement may have had a disproportionate number of local dealers; a couple of respondents from the squatter area claimed that "every" household there was selling drugs.[49]

Drugs were definitely associated with other forms of crime and violence in the community, which was the underlying reason why the survey question about drugs caused a fair amount of unease. In the random survey, a number of community members were clearly uncomfortable at the mere mention of the subject; some grimaced or rolled their eyes, and others spoke in hushed tones or clammed up. In some instances, female respondents were reticent about discussing the issue in front of their husbands (implying that the latter were implicated somehow), and several residents were worried about their neighbours finding out.[50] There was a definite fear of reprisal; several respondents expressed fears about being beaten by the smackies.[51] I believe that the threat of intimidation and violence was real; one fellow related that, a few months previously, a group of drug dealers in the vicinity had beaten him and broken his leg (he was still wearing his cast when we interviewed him) as retribution for his having organized a petition complaining about the drug problem in the community.[52] A few respondents told us that people involved in the local drug scene were capable of murder. One woman, for instance, said "If I tell you about the smackies, they will kill me… Don't give my name!"[53]

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[47] Saahasee, 2003a; 2003d; CM Interview #6; Random survey interviews #3, 17, 21, 22, 23, 33, 53, 59, 65, 71, 72, 84, 105, 107; Pradhan interview #7
[48] Random survey interviews #17, 21, 72, 73, 77, 80, 96
[49] Random survey interviews #105 and 107
[50] Random survey interview #44, 48, 56, 60, 79, 86 and 106.
[51] Random survey interviews #22, 56, 60, 73, 86, 92 and 99
[52] Random survey interview #3
[53] Random survey interview #22

As empirical research in other urban settings suggests (Moser and Holland, 1997), the effect of drug activity in Sultanpuri on social capital is, in all likelihood, deleterious. This is because, drug addiction, as is well-known, has adverse consequences on the health, well-being and livelihoods of individuals, as well as destabilizing effects on families; thus, illegal drugs represent a serious drain on the stock of human capital that could otherwise be channeled towards the building of social capital. Furthermore, the substantial trepidation and fear within the community regarding local drug activity and associated crime and violence is surely destructive to generalized trust, the social "lubricant" thought to predispose people towards acting together. Indeed, at the micro-level, the fact that some residents in the community were afraid of their next-door neighbours is a barrier to establishment of bonding or bridging relations. In addition, although my evidence is thin, it appeared that the drug culture in Sultanpuri had organized gang elements, judging by the coordinated attacks on local people, the planned theft of government property, and the obvious capacity to instill fear and intimidation. The existence of such gangs is, in itself, a form of social capital, exemplifying the fact that social capital can be used for "good" and "bad" purposes. The strong within-group bonds that, by definition, constitute a gang are usually beneficial for its members but, in this case, caused negative externalities for the wider community; this is what Putnam (2000) calls "perverse" social capital or "unsocial capital."

The entrenched nature of drug activity does not bode well for the community, at least in the short term. On a more positive note, though, the program for recovering drug addicts being run by Saahasee might help individuals to overcome their addiction and turn their lives around, which would strengthen the base of human capital over time and, by extension, improve the prospects for social capital.

Yet another social issue in the community was alcohol abuse, rated a "big problem" by 54 % of respondents; as in the data on illegal drugs, the non-response rate was high at about 19 % (again, reflecting respondents who declined to answer or, due to circumstances, the question not being asked). During my fieldwork in Sultanpuri, I witnessed a few public displays of inebriation during the day, although residents informed us that this was more of a concern in the evenings. It was primarily the men who were apt to be drinking.[54] Illegal, home-

[54] Random survey interviews #23, 97, 109 and 112

made liquor[55] was available in the community, being sold in the squatter settlement from a large plastic container in plain view and, possibly, in other locations as well. One man in the squatter area told us that he was concerned about children being exposed to such behaviour.[56] Generally speaking, the effects of alcohol abuse would be damaging to social capital in terms of its role in domestic violence and, similar to drug abuse, its destabilization of families and overall depletion of human capital.

Consumption of alcohol, moreover, was related to physical fights involving men and boys in the community, which was deemed a "major problem" by about 61 % of respondents. Based on comments from local residents the arguments over card games, which were a form of gambling, could escalate into fights, especially when alcohol was involved.[57] There were probably other precipitating factors, besides, for fighting. According to Saahasee (2003d), many males in the community carried knives to be used as a weapon (which was different from the Sikhs who wore the *kirpan*, a ceremonial knife). From the standpoint of social capital, physical fights are clearly antithetical to the spirit of cooperation and the idea of community members working together and suggestive, further, of a lack of mechanisms for conflict resolution.

Although the questionnaire instrument did not probe about any other forms of anti-social behaviour, several residents voiced concerns about prostitution in the community. It could be argued, of course, that prostitution is a livelihood strategy for the urban poor, rather than inherently anti-social; however, without delving into the ethical and moral issues, I include prostitution in the discussion here because certain aspects of the activity are often harmful to individuals, which could impact on social capital. According to several community members, including someone from the squatter settlement who, by her own admission, worked as a prostitute, many local women and teenaged girls engaged in prostitution. Much of the activity was reputed to take place in the large park after dusk. It was also claimed that the police were complicit – taking bribes for looking the other way in Sultanpuri and sometimes earning payments for transporting prostitutes to other parts of the city to work. The woman prostitute mentioned above said that she, along with other community members, earned commissions for

[55] Illegal or bootlegged liquor, sometimes called "hooch" or country liquor, is common in many parts of India; because government-approved liquor is expensive in Delhi, the bootlegged supply, which can sometimes be laced with dangerous additives, is generally what the urban poor would consume.
[56] Random survey interview #112
[57] Committee member interviews #41 and 43; Saahasee (2003d)

recruiting females.[58] One of the community pradhans told us, moreover, that there were cases in the community where husbands had forced their wives into prostitution and parents who were pimping their daughters.[59] Apart from the information above, I did not investigate further and did not come to know any specifics; nonetheless, I have no reason to doubt the informants who claimed that prostitution was part of the community fabric.

Based on my limited knowledge of the situation, the ramifications of prostitution in Sultanpuri for social capital are almost certainly negative, considering the health risks such as HIV/Aids, the allegations that minors were involved, and the general potential for exploitative relations. According to Saahasee (2003a), HIV/Aids and TB were major health issues in the community, and both diseases can be spread through prostitution (and, in other ways). Furthermore, if the broken window theory has credence, prostitution is a social sign of "disorder" that tends to invite more crime and violence which, in turn, would tend to erode generalized trust. As well, the perception of police corruption would probably not inspire confidence and trust in that particular public agency and, hence, linking relations could be impacted.

One final point about the criminal activities and associated violence, in general, in Sultanpuri is that sentiment existed that a particular segment of the community was culpable. From the remarks of respondents, it was believed that the Sikligars, the Sikh caste clustered in E6 and the squatter settlement and, to a lesser extent, the Sansi households (a Hindu caste) residing mostly in E7, were the trouble-makers.[60] Likewise, it was these two groups that were invariably identified with the local drug culture. That this perception was prevalent in the community was confirmed by Saahasee, my NGO affiliate. In my discussions with Saahasee (2003d), I asked about the veracity of this negative view of the Sikligars and Sansis, and they felt that it contained some measure of truth and probably some exaggeration (which I took to mean that not all members of those castes ought to be cast in the same light). Whether fair or not, the common perception of the two caste groups is indicative of a social divide in Sultanpuri that would tend to constrain bridging relations and, perhaps, overall cohesion in the community. To the extent that negativity towards the Sikligars, the main recipient of blame for illicit goings-on, was actually stereotyping or scapegoating, which seems a distinct possibility, such beliefs could reinforce their historic persecution and contribute to their contemporary

[58] Random survey interviews #72 and 104; Committee member nterviews #2, 17, 19 and 23
[59] Pradhan interview #7
[60] Random survey interviews #3, 15, 53, 71, 84 and 105

marginalization. Although the Sikligars are a minority religious community in Sultanpuri, the root of the divide in this case is not, in my view, religion but, instead, criminal behaviour or perceptions thereof.

9.6 Customary Community Leadership

The indigenous or customary leadership consists of the *pradhans*, the unofficial but locally-recognized leaders or chiefs; these individuals are residents of the community. In Sultanpuri, the territory of each pradhan is one or, at most, several residential lanes within the settlement. The pradhans can be understood in terms of both human capital and social capital. The human capital component incorporates the skills, ability, experience, education, and so on, that the pradhans have to draw upon as leaders. The leadership role, in turn, denotes structural social capital, that is, the interconnections and informal networks representing the members or constituencies within the community; these structures are tangible and observable. There is obviously a cognitive element, too, since the authority of the leader has to be accepted, more or less, by members in order for the leader to have legitimacy. As such, the customary leadership, as part of the social organization can, in theory, facilitate cooperative behaviour and collective action (Uphoff, 2000; Khrishna, 2000). Although the pradhans, for the most part, represent horizontal-level social capital in the community, they can, and sometimes do, in the Indian context, embody linking relations as intermediaries between the community and more powerful external actors like government departments, politicians, and political parties (Jha et al., 2007; Jha et al., 2002; Harriss, 2005).

The study community had a total of eight pradhans, of whom I was able to meet with and interview seven, utilizing the standard household questionnaire as well as a semi-structured interview format. Table 9.23 below provides a socio-demographic profile of the seven pradhans. The "average" pradhan in Sultanpuri was male, 49 years old, a home-owner, and had lived in the community for about 24 years. There were no female pradhans. Birthplaces of pradhans included Delhi, the neighbouring north Indian states, and Pakistan, which was reflective of the general community population. Six of the seven pradhans were Hindu, the other was Sikh. Six of seven, moreover, belonged to Scheduled Castes, and the other was OBC. Five of seven pradhans had no formal education; the other two had 8 and 11 years of education, respectively. Two of the pradhans belonged to the Sikligar caste, and another two

Table 9.23. Profile of Community Pradhans

Total number of pradhans	7
Number of males	7
Number of females	0
House location	
Number residing in resettlement neighbourhoods (E1, E6 and E7)	6
Number residing in squatter settlement	1
Relationship to Head of Household (HoH)	
Number of HoH's	7
Number of other household members	0
Age of pradhans	
Average age	49.4 years
Highest age	64 years
Lowest age	35 years
Religion	
Number of Hindus	6
Number of Sikhs	1
Number of Muslims	0
Caste affiliation	
Number belonging to Scheduled Castes (SC)	6
Number belonging to Other Backward Castes (OBC)	1
Number belonging to General Castes	0
Mother tongue	
Number who are Hindi-speaking	6
Number who are Punjabi-speaking	1
Education level of respondents	
Number having no formal education	5
Number having completed primary level (Class 6) or higher	2
Household size	
Average number of persons	7.6 persons
Occupancy status	
Number who own home	7
Number who are renting	0
Number of rooms in home	
Average number of rooms	4.6 rooms
Occupation of HoH	
Number working in services	3
Number working in home-based manufacturing/labourer	3
Number who are unemployed	1
Birthplace of respondents	
Number born in Delhi	2
Number born in Uttar Pradesh	1
Number born in Punjab	1
Number born in Rajasthan	1
Number born in Haryana	1
Number born in Pakistan	1
Number of years residing in Delhi	
Average for all pradhans	37.0 years
Average for all pradhans not born in Delhi (migrants) (5 pradhans)	36.4 years
Number of years residing in Sultanpuri	
Average for all pradhans	24.3 years

were from the Sansi caste; as discussed earlier, it was these two castes that had a reputation for criminal activity in Sultanpuri.

Individually, pradhans had acted in the position for a period of time ranging from 4 years up to 27 years, the latter duration referring to a fellow who first became a pradhan in the early days when the resettlement colony was established. When asked how they became pradhans, most said that they had been active in the community and the people "chose" them; one fellow said that his father had been a pradhan and he basically inherited the position. None of the pradhans had been actually elected by their neighbours. The main work of pradhans, as reported, related to settling social problems in their area, especially marital disputes and fights. Several pradhans mentioned that they tried to resolve such problems on their own, including, when necessary, determining compensation for victims, so that they did not have to bring in the police. Secondary functions of pradhans included petition-making and, to a varying degree, advocating for the general welfare of caste members. On balance, the role of the pradhans resembled that of counselors for individuals or families in need or in crisis, or adjudicators in these situations; apart from involvement in petitions, they did not seem to mobilize or organize neighbours for the purpose of collective action.

Although no women in the community had the status of pradhans, two women in the squatter settlement described themselves as "lady pradhans," on the basis that they performed the same kind of tasks as the male pradhans, notably resolving social problems. I have heard of instances of women in other settlements in Delhi who were acknowledged as pradhans, but the institution, like the Indian family structure, is patriarchal.

In my interviews with the pradhans, I attempted to ascertain the extent to which these individuals provided interconnections within the settlement, which corresponds to Woolcock's concept of integration. This dimension was not easy to get at through qualitative questioning, especially because I sensed that a few of the pradhans, understandably, wanted to present themselves in a positive fashion – as serving all of their constituents, irrespective of caste, religion, gender, and so on. However, the two Sikligar pradhans and one of the Sansi pradhans clearly portrayed themselves as leaders of their particular caste groups, rather than residents at large in their neighbourhoods; in conversation about their responsibilities and goals, for instance, the three pradhans emphasized the advancement of their respective caste members. A fourth pradhan, belonging to a different caste group, informed us that nearly all households in his lane were of the same caste and, thus, he was, effectively, the leader of his caste mates. A

fifth pradhan, from the squatter settlement, spoke about working on behalf of everyone in the area, regardless of their background. In the case of the other two pradhans in the community, it was difficult to gauge the pattern of interaction with neighbours.

When queried about the amount of contact with other pradhans in Sultanpuri, it was apparent that interaction among the group of pradhans was somewhat limited; the Sikligar pradhans had regular contact with each other and, likewise, the Sansi pradhans, but the others either did not know each other or did not intermingle. Based on my interview data, I believe that the pradhans contributed to integration in the community, albeit in a certain way: social interconnections tended to be segmented, both in terms of locality and caste. The caste-based interaction, which was probably a feature of some pradhans more than others, is representative of bonding social capital, as opposed to bridging relations.

Connections between the pradhans and government officials and local politicians, which denote linking social capital, for the most part revolved around petitions. To a lesser extent, several pradhans met face-to-face with local politicians on an *ad hoc* basis, and the others never met. A couple of the pradhans expressed major disenchantment with their local politicians, including sentiments such as "They won't do anything."[61] Besides petitions and occasional meetings, though, there did not seem to be any regular forms of interaction between community leaders and government or political actors. The PLUS Project, while carried out in the community was, of course, sponsored by Saahasee, an external NGO and, as such, could be viewed as part of linking relations; in this regard, two of the seven pradhans were quite involved with PLUS and a third participated minimally. As far as connections to civil society organizations outside the community, two pradhans were members of caste-based welfare associations and the rest did not belong to any.

The situation of the Sikligar pradhans, in particular, seemed to exemplify the general lack of linking relations in Sultanpuri. When the Sikligar pradhans were asked what were the most pressing problems that they faced as leaders, the two men cited the inadequate occupational conditions of their caste members; more specifically, as iron workers, they were in dire need of a proper factory and land on which to build it in order to increase productivity, reduce work-related hazards, and improve their quality of life. As it was, the Sikligar households were making do with what they had, that is, working within the confines of their small houses, which produced a lot of fumes, and in front of their houses in the cramped lane way; on top of

[61] Pradhan survey interview #4

that, materials and equipment had to be stored inside their houses. Given these circumstances, the Sikligar pradhans had wanted to secure a factory site for a long time. One of them said that, in the early 1980s, he met then-Prime Minister Indira Ghandi and she, apparently, agreed to provide funding; Ghandi, of course, was assassinated in 1984 and any promise of help never materialized. Since that time, the Sikligar pradhans had not been able to enlist support from anyone in Delhi in a position to help them. As a result, the pradhans said that their economic status was such that many families could not afford to send their children to school. What is more, the Sikligar households in the community had a high incidence of TB, and the pradhans were truly worried about the future of their caste group.[62]

The pradhans in general, moreover, did not represent a source of information to local residents about the Delhi Government, which could have otherwise been a valuable asset to the community. As shown in Table 9.24, when respondents in the random survey were asked how they kept informed on what the Delhi Government was doing, the main channels of communication were television, followed by friends and neighbours and newspapers; no respondents obtained such information through their pradhan. That so many households relied on TV was, perhaps, not surprising, since about 88 % of households in the community (including the squatter colony) had one. On balance, it appeared that the pradhans, as a group, did not function as key conduits or intermediaries with external actors that might have

Table 9.24. Household Sources of Information about the Delhi Government

Source of Information	# of Responses*	Percentage
Family members and relatives	8	4.3
Friends and neighbours	48	25.7
Newspaper	30	16.0
Radio	9	4.8
Television	85	45.4
Organizations (including Saahasee)	1	0.5
Business or work associates	1	0.5
Pradhans	0	0.0
Government officials	0	0.0
Local politicians	0	0.0
No sources	5	2.7
Totals	187	100.0

* Respondents in some cases provided multiple answers

[62] Pradhan survey interviews #4 and 5

provided useful information, resources or influence for the benefit of the community.

Lastly, data collected on the pradhans are mixed with respect to the quality of leadership. The positive, self-reporting of the pradhans' work and role in the community should probably be tempered, in my view, by the perceptions of community members, which had an element of negativity. For example, the trust data from the random survey, as provided in Table 9.11 above, show that 17.5 % of respondents placed a great deal of trust in their pradhans, 3.5 % had a small amount of trust, and about 16 % had no trust; a large percentage said "Don't know" (49 %) and, for another 11 % of respondents, the question was not applicable because there was no pradhan in their lane. These data, it can be said, do not reflect a high degree of trust towards the pradhans. By way of comparison, in terms of the percentage of respondents who had a great deal of trust, the pradhans, at 17.5 %, fared only slightly better than the local politicians (at 16.7 %) and rated lower than the government employees (at 18 %).

I did not collect data on why community members did not place a lot of trust in their pradhans; one reason might be, however, that none of the pradhans were actually elected in Sultanpuri, all having assumed their positions and, thus, some may have not have enjoyed full legitimacy. On the other hand, a few of the pradhans, through their own actions, may not have garnered the respect of community members; for instance, it was alleged that one of the pradhans was involved in the local drug trade, selling drugs to customers of prostitutes in the large park after dusk.[63]

9.7 Customary Linking Relations and the PLUS Project

This final section gives an overview of the study community's vertical, or linking, relations with two important external actors: the environment-related government service providers from the Municipal Corporation of Delhi (MCD) and Delhi Jal Board, and the local politicians. As in the preceding discussion, the primary focus is on the usual or customary dimensions of life in Sultanpuri – what existed prior to intervention of Saahasee and continued, to some extent, in parallel with the various initiatives undertaken through the PLUS Project. In terms of customary relations with the government service providers that operated in Sultanpuri, the general picture is that of recipients or "beneficiaries" of inferior public services. As discussed in Chapter Eight, from the standpoint of the community, all of the environment-related services were deemed deficient in one way or another, partly due to the

[63] Committee member interview #23

shared nature of much of the infrastructure and low allocation of municipal resources, but also compounded by government worker absenteeism, shirking and bribe-taking. In reference to Table 9.24 above, moreover, no respondents in the random survey reported being kept informed about the Delhi Government through government sources, which points to a lack of transparency and inadequate channels of communication. Having few, if any, institutionalized mechanisms for interaction and problem-solving with government departments and agencies, local residents resorted to a basically reactive strategy of petitions and occasional protests in hopes of influencing the decision-makers to take action over the worst situations, at least, in Sultanpuri.

At the same time, several government officials whom I spoke to had complaints, probably not without substance, about community misuse of infrastructure and facilities and lack of understanding of constraints that they faced.[64] In short, the community was in a subservient position relative to the government service providers and seemingly powerless to meaningfully alter the status quo; some measure of frustration, antagonism and apathy existed on both sides. To use Woolcock's terminology, relations between the community and government service providers were lacking in synergy.

Regarding the local politicians, the community had relations that were fundamentally clientelistic. The first politician, who lived in the community, was the Ward Councillor for Sultanpur Majra (Ward No. 40) in the local government (MCD). This person was a Muslim woman, her religious affiliation being atypical in the predominantly Hindu community, and a representative of the Congress Party, the traditional political party of the poor in Delhi (Harriss, 2005). According to Saahasee (2003b), this woman was the councillor in name only; the real power was her husband who had previously held the position and, when the seat became reserved for a woman in the last municipal election, he installed his wife in office. Such an occurrence is not unusual in India where, following a 1992 constitutional amendment that designated one-third of local government seats for women, elected women have frequently been proxies for politically powerful men (Goetz and Jenkins, 2005). My own observations in Sultanpuri are consistent with Saahasee's view of the woman as more of a figurehead; it was always the husband, for instance, that I saw holding court with community members, government employees and others in a small park near their house that he had appropriated for

[64] External stakeholder interviews #3, 7, 10 and 11

his outdoor office and meeting space. Likewise, when I requested an interview with the local councillor, the husband and wife both attended and the husband did almost all the talking.

The *de facto* local councillor, the husband, was 38 years old, a secondary school graduate, and had come to Delhi from the state of Uttar Pradesh in 1984. This fellow was unequivocally described by Saahasee (2003b) as *pucca goonda*, which translates approximately as "hardcore goon."[65] The community was essentially a vote bank for the local councillor in that he portrayed himself as their champion in exchange for political support. Residents were given food and alcohol for attending his political rallies and casting votes for him; allegiance was also apparently maintained through intimidation, although I do know the extent to which it was overt or a function of reputation (Saahasee, 2003d). I did hear about complaints of coercion from a couple of older residents who said that, only if they attended the political rallies of the councillor, was he willing to sign the forms required for them to receive their pensions.[66]

When I interviewed the husband and wife, the man emphasized their commitment to Sultanpuri and the positive changes that had occurred while they had been councillors, including a new electrical transformer, sewer connection, and community centre. The man said that he had secured jobs for a number of local residents with different government departments. The main problems in the community, they felt, were lack of education and unemployment. The husband spoke highly about the PLUS Project; though not currently active, he had been involved with PLUS in the early stages. All in all, the husband, as a seasoned politician, projected a good image and, as would be expected, did not allude to any unsavory aspects of his power base.[67]

The other politician for the area, who did not live in the community and had less of a day-to-day presence, was the Member of the Legislative Assembly (MLA) for the state-level Delhi Government and a Congress Party member as well. I attempted to interview this person, but the meeting fell through when he had to leave Delhi abruptly; consequently, I know about this individual from second-hand sources only. At the time of my fieldwork, the MLA, a Hindu,

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[65] The local councillor was, in other words, a strongman, a force to be reckoned with on account of his stable of *goondas*, people kept around for the purpose of bullying residents, collecting bribes, providing physical protection, and the like, a common practice of many politicians around the country (Jha, Rao and Woolcock, 2007). It was this individual who, I was told by Saahasee, could put an end to my research in the community at any time, had he wanted to; because several questions in my household survey (e.g., the trust question) and issues raised (e.g., crime and violence) might have been construed as threatening, I treaded carefully around this person.
[66] Random survey interviews #33 and 89
[67] Interview with local councillor and former local councillor in Sultanpuri, Dec 30, 2003

was in the forefront of the Dalit (former Untouchables) leadership of the Delhi wing of the Congress Party, and well-connected to Delhi Chief Minister Sheila Dikshit.[68] Similar to the local councillor, he had managed to give his political seat to his wife; this happened in the 1997 election which he did not contest, despite having served in the previous government, because of criminal charges brought against him at the time by the Central Bureau of Investigation (CBI) related to inciting violence against the Sikhs in Sultanpuri during the 1984 riots. The wife held the position for several years and then, after the husband was acquitted of the charges in 2002, he regained his MLA seat in the 2003 election. The man is still under a cloud of suspicion, however, as the CBI has since appealed his 2002 acquittal.[69] The reputation of this politician, based on information from Saahasee and the Delhi newspapers, was that of a gangster.[70]

Given that there likely was an intimidation factor, the underlying rationale for community support of the two politicians in Sultanpuri was, I believe, the distribution, or promise, of resources and influence under their patronage. Although there was, according to the councillor, individual favours such as jobs, the main benefits were collective in nature: the pledge from the politicians to improve infrastructure and services in Sultanpuri and, additionally, in the case of squatter residents, to protect them from eviction. The appeal of the MLA, moreover, could also have been rooted in caste identity since he projected himself as a leader to the Dalits, who formed a large proportion of the community. Interestingly, although the study community constituted a vote-bank for both the councillor and the MLA, this did not equate with residents actually holding a high degree of trust towards them; in reference to Table 9.11 above, less than 17 % of residents placed a great deal of trust in their local politicians, while 65 % did not trust them at all. As far as being a source of information about the Delhi Government to the community, the politicians, like the government employees, were clearly not, as data from 9.24 above attest.

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[68] The Hindu. 2005. "Power struggle for Dalit leadership in Congress." *The Hindu* (Jun 24). Accessed online at: http://www.hindu.com/2005/06/24/stories/2005062411880400.htm

[69] The Hindu. 2007. "CBI changes lawyer in anti-Sikhs riots case." *The Hindu* (Mar 13). Accessed online at: http://www.hindu.com/2007/03/13/stories/2007031318500500.htm on Jul 15, 2007; The Hindu. 2002. Sajjan Kumar acquitted in anti-Sikh riots case." *The Hindu* (Dec 24). Accessed online at http://www.hinduonnet.com/2002/12/24/stories/2002122404870100.htm on Jul 15, 2007

[70] A source from Saahasee (2003d) informed me that at a public meeting in Sultanpuri, some time prior to my fieldwork, the MLA made an appearance and, brandishing a gun, warned staff members present against working in the community.

It seems to me that community members effectively cast their lot with these politicians, even though they did not really trust them and may have, even, regarded them as scoundrels, for the reason that they were evidently powerful and, as such, in the absence of viable alternatives, represented their best hope. Notwithstanding that my information about the councillor and MLA is incomplete, my sense is that these politicians may have dispensed benefits to the community from time to time (e.g., distribution of infrastructure), which probably did alleviate certain problems but, over the longer term, such relations were inherently about dependency and control.

On the whole, the data on customary linking relations in Sultanpuri fit in with the general characterization of economically poor communities in the literature insofar as the extent of vertical connections to external actors was restricted and the nature of existing ties, furthermore, was unproductive if not exploitative (Mitlin, 1999; 2001; Philips, 2002; Majumdar, 1995; Desai, 1996). While my discussion has focused on the government service providers and local politicians, it should also be pointed out that the community did not have established relations with the formal private sector. The community did not have, under the status quo, any real clout with more powerful external actors, apart from acting as a vote-bank. As well, in line with the Indian discourse on state-society relations in many parts of the country (Sharma, 2002; Paul, 2002; Gore, 2003, Tandon, 2002), residents of Sultanpuri were essentially alienated from decision-making processes of local government that impacted on environmental conditions and quality of life in their community. Contributing to this estrangement was the dearth of information that community members received from government officials and political leaders. Finally, the low trust levels towards government service providers and politicians can be viewed as symptomatic of a cynicism towards those in positions of power that the Indian literature contends is fairly prevalent around the country (Gore, 2003; Narayan, 2003, Sharma, 2002).

Lastly, Saahasee, the NGO that had been working in the community for several years, can be thought of as component of the linking relations. For residents of Sultanpuri, Saahasee represented a departure from the usual pattern of relations with external actors, providing a different set of resources within the framework of a more supportive, capacity-building approach. At this point, though, I defer further comment about Saahasee and the ensuing transition in Sultanpuri to the next chapter, which covers the collaboration between the community and the NGO under the PLUS Project.

Chapter Ten: Community-Based Environmental Management in Sultanpuri

This chapter examines the various initiatives in community-based environmental management that occurred in Sultanpuri between 2000 and early 2004, as part of Care-India's PLUS Project. The material in the chapter relates to my third research question, which focuses on the efficacy of community efforts to address common needs. Multiple data sources are utilized in the discussion, including project reports and other documents, the environmental committee members survey, committee meeting minutes, and interviews with PLUS staff and other external stakeholders. My period of fieldwork coincided with the second half of the implementation of PLUS in Sultanpuri, that is, from 2002 to early 2004 and, hence, the different initiatives were either relatively recent or ongoing at the time.

The chapter is organized into four main parts. The first section introduces the PLUS Project and its objectives, approach, and institution-building process. The second section looks at the environment-related committees that were formed during the project, in particular, the membership profile and functioning of the grassroots organizations. The third section describes the specific initiatives in water supply, sanitation, solid waste management, and park planning, which were undertaken through PLUS. The fourth and final section is a more detailed analysis of the community water-distribution system that was implemented in the squatter settlement.

10.1 The PLUS Project

As mentioned in Chapter One, the Care-India's PLUS Project was a five-year pilot initiative (1999-2004) with the overall goal of demonstrating an approach to urban development that results in meaningful improvement in the quality of life of the urban poor in Delhi. In support of the primary goal, the main objectives of PLUS were twofold: (1) to promote community-based solutions to problems of inadequate infrastructure and services and degraded local environments; and (2) to further the inclusion of Delhi's poor into civic structures and decision-making processes (Care-India, n.d.). As such, the first objective can be thought of as practical in nature and shorter-term, and the second as transformative and longer-term. The emphasis on community-based approaches followed from the basic premise of Care-India that the urban poor constitute an essential, yet often untapped, force for improving the quality of life in their households and neighbourhoods, as well as for the city at large (Care India, n.d.). The aim of greater inclusion in urban governance, on the other hand, embodied a conscious attempt by project designers to go beyond alleviation of the symptoms of poverty status to

address systemic causation. From the standpoint of Care-India, the inferior living conditions typical of Delhi's low-income areas are rooted in the exclusion of the poorer segment of the population from the urban development agenda in general. In this vein, the alienation of the urban poor, to a large extent, from city-level services, institutions of governance, and support mechanisms is the primary obstacle to be overcome (Care India, n.d.).

The PLUS Project, therefore, was intended to not only facilitate tangible, community-initiated projects to respond to immediate needs and priorities, but also enable community members to learn about their rights as citizens, to make demands on government resources, and to exert influence on public policy at the city level in advancement of their strategic or longer-term interests.

The strategic approach employed in the project had a number of cornerstones. First of all, PLUS utilized a bottom-up development model of action-oriented learning (AOL), in which community members were to be, ideally, integrally involved in all phases of the project cycle.[1] This process was considered central to instilling ownership of community-level initiatives. Secondly, PLUS was envisioned as a community-NGO-government partnership, potentially extending to the private sector, which, as discussed in Chapter Four, fits in with the current paradigm of urban governance in India. Thus, the idea was for project communities, with local NGOs acting as intermediaries, to build on their existing relations with external actors and to forge new linkages and alliances based on mutual self-interest. Thirdly, capacity-building was central to the PLUS Project and the AOL process, specifically, in that community members were to acquire the requisite skills, training, information, and personal confidence to allow them to effectively participate and take action. Through capacity-building and strengthening of partnerships, the expectation was that communities could, in time, assume more of the responsibility for the various initiatives and become self-reliant, allowing for withdrawal of Care-India. Fourthly, the PLUS Project was conceptualized as fundamentally about communities addressing their problems through collective action, in the sense of local residents acting together to achieve common objectives and, furthermore, in the joint implementation and management of community-level projects with supportive external actors.

[1] In the proposal documents of Care-India, action-oriented learning at the community level is characterized as an ongoing cycle of learning-and-doing, comprising the following four stages: (1) identification of needs and resources; (2) planning and implementation of action plans; (3) monitoring of progress against goals and objectives, along with problem identification and resolution; and (4) review and learning from previous steps, which can result in new forms of action such as information dissemination and advocacy (Care-India, n.d.).

While the original proposal document for the PLUS Project does not utilize the term "social capital," the endeavour, in my view, was implicitly about developing, or enhancing, the social relations and concomitant resources of communities (i.e., social capital) in order to take collective action to improve their quality of life and foster social change. As the PLUS Project was externally-driven, it represents a case of social capital inducement, as opposed to social capital creation as a by-product of other activities. The PLUS Project, moreover, in its consensual approach to development, was arguably consistent with mainstream thinking about social capital; the *modus operandi*, in other words, was about working within given structures and availing of opportunities, such as they presented themselves, to effect change incrementally, as opposed to directly challenging the basic structure itself. One final point about PLUS is that, like many development interventions, the onus was on the establishment of structural social capital, like CBOs and partnerships with external actors; the cognitive dimensions, like trust and norms, were secondary.

10.1.1 Preliminary Activities and Community Planning Exercise (2000):

Implementation of the PLUS Project in Sultanpuri commenced in early 2000 when Saahasee's project staff was in place and working out of a small office in the community. As Saahasee had not worked in the area previously, the staff initially carried out a series of information-gathering activities (e.g., baseline household survey, semi-structured interviews, mapping, problem analysis) to find out about the socio-economic status of residents, history of the settlement, living conditions, and level of infrastructure and services (Sharan, n.d.[a]). Around this time, project staff also made contact with representatives of government departments providing services in Sultanpuri to inform them of the PLUS Project and request their involvement (Sharan, n.d.[a]). This groundwork culminated in a two-day community planning exercise, organized by project staff, which was held later that year in August. The scope of the planning exercise, referred to by PLUS as micro-planning, was two neighbourhoods within the project site: the E6 squatter settlement and the E6 resettlement area. These two neighbourhoods were selected on the basis of having the most pressing needs within the project site at the time, with the intention was to expand into the other neighbourhoods (E1 and E7) in the second year of implementation.

To mobilize residents of E6, PLUS staff used a street theatre group to go into the lanes and, through the medium of song, invite them to a play to be held in the community. The play

itself introduced the upcoming micro-planning process in an entertaining fashion and emphasized the importance of participation from the community. Community turn-out at the micro-planning was fairly good, ranging from 35 to 50 people on each of the two days (out of about 400 households). Participants were mostly Sikligars from the E6 resettlement lanes and a more heterogeneous group from the squatter colony, in roughly equal numbers of men and women (Sharan, n.d.[a]). In addition to the community, other participants included officials from several government departments,[2] the local municipal councillor, and the PLUS Project staff who acted as facilitators (Sharan, n.d.[a]).

The purpose of the micro-planning was, in a nutshell, to identify the needs and aspirations of local residents and kick-start the process of community-based collective action to address those issues. The first day was mainly spent in articulating community needs and, following discussion and consensus-building, prioritizing the issues. Community members made the decision, as a group, to take up the three highest-priority issues, which were water supply, drains, and sanitation (i.e., litter and toilets) in the first year (Sharan, n.d.[a]). Issues accorded lower priority were to be followed up later on.[3] Upon setting these goals, community participants were divided up into three committees corresponding to the prioritized issues. With each committee, the PLUS staff conducted a series of exercises over the remainder of the first day and on the second day to explore the nature of the issues (reasons why it is a problem, who is affected and where) and to formulate solutions (what is needed to address the problem, constraints, what the community can do themselves, what the community requires assistance with).

In addition, arrangements were made for interaction between community members and government officials, involving discussion of roles and responsibilities related to various services and airing of complaints from both sides. The micro-planning concluded with each of the three nascent committees working out a rudimentary action plan and the government officials pledging their cooperation, including attendance at future committee meetings and better-quality service provision in future (Sharan, n.d.[a]). Apart from tangible outcomes like the committee organization and action plans, the micro-planning exercise was important in other respects. For instance, the PLUS staff were encouraged that residents from the two

[2] Government officials, who attended on the second day, included representatives from the MCD Sanitation and Drainage Departments, as well as the Delhi Jal Board.
[3] The lower-priority issues were electricity, unemployment, roads, illiteracy and education, drug addiction, medical facilities, physical disabilities, and housing (Sharan, n.d.[a]).

neighbourhoods in E6 were able to sit together to talk about common problems because, previously, relations had been strained (Sharan, n.d.[a]). Also, the PLUS staff had not been entirely sure that the government officials would even attend; prior to the micro-planning, the experience of the community with the different government service providers had been limited to the Delhi Jal Board and, thus, the common forum and the sharing of views was a significant event (Sharan, n.d.[a]).

10.1.2 Expansion phase (2001-2004)

In the successive implementation years (2001-2004), the PLUS Project expanded in Sultanpuri into the E1 and E7 neighbourhoods, both part of the resettlement area. While the first year of the project (2000) was oriented towards the development needs of the squatter settlement, the expansion phase addressed other issues that were relevant to the resettlement neighbourhoods and the community as a whole. The latter initiatives were primarily in the area of municipal park planning and solid waste management.

PLUS opted to not carry out the micro-planning exercise at the outset with the E1 and E7 neighbourhoods, instead activating and organizing local residents more informally. The fundamental approach taken, however, was similar to that which occurred in micro-planning, namely, identification of common concerns via focus groups, striking of neighbourhood-level committees, and formulation of action plans. Organization of new committees during the expansion period was driven by PLUS; the staff approached individuals to sit on committees based on interest shown or some kind of affinity towards a particular committee (e.g., several residents employed as municipal drain cleaners were asked to join the Sanitation committee, and residents living in houses facing the large park were invited to the Parks committees). In addition, the assistance of local pradhans was requested to help recruit members from within their lanes and a few committee members joined through word-of-mouth.

The PLUS Project staff included a Project Coordinator, Assistant Project Coordinator, and three Community Mobilizers who, at the time of my fieldwork in 2003/early 2004, were assigned to the Water, Parks and Solid Waste committees, respectively.[4] The PLUS workers acted as facilitators to the various committees from the squatter and resettlement neigbhourhoods, providing information, logistical support and capacity-building. In addition,

[4] The Project Coordinator and Assistant Coordinator were individuals from outside the community, while the Community Mobilizers were from Sultanpuri and another resettlement colony nearby. The coordinator and assistant were paid competitive NGO wages; the community mobilizers were given a monthly honourarium.

PLUS staff functioned as intermediaries between the community and government officials. In some instances, the process of institution-building that occurred in Sultanpuri from 2000 to 2004 evolved into community management of local infrastructure and services, with varying degrees of success. The functioning of the committees and their respective initiatives will be covered in more detail in the ensuing sections.

10.2 Environmental Committees

Through the PLUS Project, a total of seven environment-related committees were formed: the three committees that originated from the micro-planning and four more committees that evolved during the expansion phase. Each committee was neighbourhood-, rather than community-based, in the sense of being comprised of members from specific neighbourhoods, as opposed to the larger project site. Table 10.1 below lists the different committees and neighbourhood affiliations. The Drains Committee from the squatter settlement was relatively short-lived and the issue of drains became incorporated into the Sanitation Committee. The

Table 10.1. Environmental Committees in the PLUS Project

Committee	Neighbourhood
Water	Squatter settlement
Drains and Paving	Squatter settlement
Sanitation	Squatter settlement
Parks – E1	E1 Resettlement area
Parks – E6	E6 Resettlement area
Parks – E7	E7 Resettlement area
Solid Waste Management	E6 and E7 Resettlement areas

role of the committees, as envisioned in the PLUS Project, was primarily to set objectives, develop and carry out action plans in conjunction with PLUS staff and other external actors, and help garner support from the community. The committees were thus the main vehicle for inculcating a sense of community "ownership" (Sharan. n.d. [c]).

10.2.1 Membership Profile

All committee members, 43 in total, were interviewed with the same household questionnaire utilized in the random survey. This group included members who were currently active, and members who were no longer active at that time. The basic socio-economic data for the

committee members are provided in Table 10.2 below. Members were predominantly female and belonged to the Scheduled Castes (58 % and 56 % of members, respectively), averaging 39.5 years in age. Most members were either heads of households (54 %) or spouses (33 %). Nearly two-thirds resided in the resettlement neighbourhoods (65 % of members), while the other one-third was living in the squatter area (35 % of members). Over one-half of members had no formal education (56 %). As far as occupational status, just over 50 % were not employed or retired, with the remainder mainly engaged in services, manufacturing and construction, and petty trading and vending. Women formed the majority of committee members falling in the not employed/retired category (15 of 22 members).

The group of 43 committee members was compared to the random sample of 114 respondents from the community by way of t-tests (to compare means) and Pearson chi-square tests (to compare categorical variables). These tests revealed few statistically significant differences between the two groups. Thus, no differences were found in regards to average age, religion, caste affiliation, mother tongue, education level, household size and composition, occupancy status, average length of residence in Sultanpuri, and household assets. However, there is a significant relationship between house location and committee membership ($p = .003$). The 35 % of the membership accounted for by the squatters is disproportionately high, considering that they represented only 14 % of households in the random survey (shown in Table 7.1 in Chapter Seven). The reason for the relatively higher representation of squatter households was Saahasee's more intensive mobilization efforts in that area of the project site, especially during the first year of implementation.

A significant relationship exists, moreover, between birthplace (state), categorized as Delhi and non-Delhi (i.e., migrants), and committee membership ($p = .011$). Nearly 54 % of committee members were born in Delhi, compared to about 32 % of respondents in the random survey (also shown in Table 7.1 in Chapter Seven). Possible explanations for the greater propensity of Delhiites to join the committees could be a deeper attachment to the city or, perhaps, more confidence in terms of taking action (via the committees) as a result of their longer life experience in that particular urban setting. One other dissimilarity between the committee members and random respondents relates to the average length of residence in Delhi which, at 33.3 and 26.4 years, respectively, is significantly different ($p = .004$). Birthplace and average length of residence in Delhi are likely correlated, although I have corroborated this.

Table 10.2. Socio-Economic Characteristics of Environmental Committee Members

Total number of members	43
Percentage male	41.9
Percentage female	58.1
House location	
Percentage residing in resettlement neighbourhoods (E1, E6 and E7)	65.1
Percentage residing in squatter settlement	34.9
Relationship to Head of Household (HoH)	
Percentage HoH	53.5
Percentage spouse	32.6
Percentage son, daughter or daughter-in-law	11.6
Percentage other	2.3
Age of members	
Average age	39.5 years
Minumum age	15 years
Maximum age	65 years
Religion	
Percentage Hindu	81.4
Percentage Sikh	18.6
Caste affiliation	
Percentage Scheduled Castes (SC)	55.8
Percentage Other Backward Castes (OBC)	14.0
Percentage General Castes	18.6
Percentage Don't Know/Nonclassified	11.6
Mother tongue	
Percentage Hindi	86.0
Percentage Punjabi	9.3
Percentage Rajasthani	4.7
Education level of members	
Percentage having no formal education	55.8
Average number of years of education - all members	3.4 years
Average number of years of education - female members	2.5 years
Average number of years of education - male members	4.6 years
Household size and composition	
Average household size	6.6 persons
Percentage nuclear families	51.2
Percentage extended families	39.5
Percentage single-parent families	9.3
Occupancy status	
Percentage owning home	93.0
Percentage renting	4.7
Percentage other arrangement	2.3
Occupation of members	
Percentage petty trading and vending	9.3
Percentage transport	2.3
Percentage services	18.6
Percentage manufacturing/construction/daily labourer	11.6
Percentage professional	0.0
Percentage not employed/retired	51.2
Percentage government employees	7.0

10.2.2 Individual-level Benefits and Costs of Participation

The semi-structured interviews, carried out with 25 of the committee members, included several open-ended questions that probed about personal benefits and costs of participation on the various committees. Of those 25 members, most described themselves as currently active (20 members), while the others presented themselves as non-active, but with previous involvement (5 members). The terms "benefits" and "costs" are used broadly here to refer to incentives and disincentives, respectively, which can be either monetary or non-monetary in nature. The most-commonly cited benefit, as reported by about half of committee members, was non-monetary and pertained to increased self-esteem, personal confidence, and status in the community. Such sentiments were expressed mainly by members of the Water Committee and Solid Waste Committee and, to a lesser extent, members of the Sanitation Committee and the three Parks Committees. The leader of the Water Committee, for example, conveyed that the opportunity to do, in his words, "social work" in the community was intrinsically fulfilling as part of his personal calling or self-actualization.[5] For several other committee members, on the other hand, self-esteem was related to acquiring more self-assurance in public; one woman said "I can be bold now – I look forward to it… sitting with the big [powerful] people and talking to them."[6] Likewise, another woman explained to us that she had gained in confidence and spoke with pride, in particular, about using a loudspeaker [bullhorn] at a community meeting.[7]

Other committee members stated that their committee involvement had enhanced their reputation or stature in the community, which was, effectively, a boost to their self-worth. In this vein, a woman who had been very active on the Water Committee told us: "Now, they [other residents in the squatter colony] know my name… everybody praises me – 'It's because of you that we got this water [the municipal connection].'"[8] A man from the Sanitation Committee felt that his work had improved his reputation and speculated that, when he dies someday, his neighbours will remember him for his activities in the community.[9] Apart from self-esteem and status, a number of committee members talked about genuinely enjoying the social interaction or the work itself. One woman from the Solid Waste Management Committee, for instance, referring to her efforts to instil awareness about wet and dry source

[5] Committee member interview #1
[6] Committee member interview #24
[7] Committee member interview #23
[8] Committee member interview #2
[9] Committee member interview #12

separation with other households in her lane, said that she found such work satisfying.[10] A male youth (teenager) from the same committee, who was not attending school or employed at the time, expressed that his participation was pleasant and, moreover, preferable to staying at home or just "roaming around" aimlessly.[11] In addition, a few committee members mentioned other types of non-monetary benefits, such as increase in knowledge, awareness of rights, making useful contacts, and gaining practical, work-related experience.[12]

Monetary benefits, or the potential thereof, were cited only by several members of the Solid Waste Committee who were involved in marketing of compost produced from a local composting initiative. These members, four in all, were brought in to the marketing role on the understanding that, if and when the composting enterprise became financially viable, they were to receive financial compensation; as of early 2004, however, none of the marketers had actually been given any payment and their work was entirely voluntary up to that point. Finally, in contrast to the majority of committee members who did perceive some form of associated personal benefit, a few individuals responded in the negative and emphasized that it was the community, as a whole, that had benefited.

In terms of costs, the most obvious one was the time commitment of committee members, which included meeting attendance and carrying out tasks in the community and, for some members, going to see government officials and others and performing various duties outside the community. The amount of time spent by the active committee members, at the time of my survey (Nov-Dec 2003), ranged from one or two hours a week to upwards of six hours per day. The largest time commitment was being made by certain members of the Water Committee and Solid Waste Committee. A core group of 3-5 Water Committee members were contributing 2-3 hours per day and the leader, on a fairly regular basis, put in half-days or even full days (7 days per week). On the Solid Waste Committee, a number of members were spending 2-3 hours per day and those involved in marketing as much as 5-6 hours per day (5 days per week). The time commitment of members from the Sanitation Committee was around one or two hours a week. As far as the three Parks Committees, members were mostly non-active at the time of my survey, although many of them, along with those from the Sanitation

[10] Committee member interview #30
[11] Committee member interview #37
[12] Committee member interviews #2, 21, 37, 40, 41

Committee, had contributed substantial amounts of time in previous years, especially during the initial implementation period in 2000 and the early expansion phase in 2001.

Membership on all committees did not entail any direct or up-front monetary costs (e.g., membership fees). Nevertheless, several committee members reported financial opportunity costs in the past, such as taking time off from their jobs to attend important meetings and do related committee work.[13] One woman mentioned, in essence, another kind of opportunity cost, that of having to forego her domestic responsibilities at times.[14] A few members cited specific difficulties in their committee work that could be interpreted as costs of different sorts. As such, the most extreme case was the leader of the Water Committee, who told us that he had been physically beaten by squatter residents for denying them access to piped water as a result of non-payment to the community water-distribution fund.[15] Less serious by comparison, yet important, a couple of marketers from the Solid Waste Committee voiced frustration over not receiving any payment for their long hours.[16] One woman reported being scolded by family members for occasionally coming home late from her committee activities, although this reaction was atypical for most members.[17] The large majority of committee members, in fact, stated that they faced no difficulties in their work and that their families had been supportive all along.

10.2.3 Functioning of Committees

The basic workings of the seven environment-related committees, summarized in Table 10.3 below, reveal a few noteworthy trends. Membership size of the various committees, as shown in the table, is reflective of the overall low level of associational affiliation in the community. In general, the number of members decreased over time, that is, from the early phase of PLUS when the committees were formed (2000 to 2002) to the latter stage of PLUS (2003/early 2004). Exceptions to the trend are the Water and Solid Waste committees, in which the total number of members remained fairly constant. The decline in membership was partly attributable to the dissolution of the Drains and Paving committee in 2002, once it had achieved its goal of permanent drains and paving in the squatter area. Of the other six

[13] Committee member interviews #6, 24, 26
[14] Committee member interview #43
[15] Committee member interview #1
[16] Committee member interviews #37, 41
[17] Committee member interview #30

Table 10.3. Functioning of Committees

Committee	Membership Size		Level of Activity		Relations with External Actors	Scenario in 2003/2004		
	In initial year	In 2003/2004	In initial year	In 2003/2004		Leadership	Meeting Frequency	
							Formal	Informal
In Squatter Colony:								
Water	10 (2000)	10 (6 active)	High	High	Delhi Jal Board Central Ground Water Board	Community leader and PLUS staff	Monthly	Weekly or daily
Sanitation	12 (2001)	6 (5 active)	Low	Low	Conservancy and Sanitation Dept. (MCD)	Group-based leadership No PLUS involvement	None	Every 2 weeks
Drains and Paving	15 (2000)	0 (Defunct committee[1])	Moderate	No activity	Slum and JJ Dept. (MCD)	Community leader and PLUS staff (formerly)	None	None
In Resettlement Area:								
Parks E1	15 (2001)	5 (0 active[2])	Moderate	No activity	Horticulture Dept. (MCD)	No PLUS involvement No community leader[3]	None	None
Parks E6	10 (2001)	6 (3 active)	Moderate	Low	Horticulture Dept. (MCD)	PLUS staff No community leader	Every 2 months	None
Parks E7	20 (2001)	7 (4 active)	Moderate	Low	Horticulture Dept. (MCD)	PLUS staff Community leader inactive	Every 2 months	None
Solid Waste	17 (2001)	14 (13 active)	Moderate	High	Conservancy and Sanitation Dept. (MCD) Waste pickers	PLUS staff No community leader	Every 1-2 months	None

[1] The Drains and Paving Committee disolved in 2001 once the drains and paving were completed in the squatter area

[2] After a dhalao was constructed in close proximity to the E1 neighbourhood in 2001, all members of the local Parks Committee became inactive

[3] Following the dhalao construction, the leader of the Parks Committee also stepped down

committees that continued to operate, however, the Sanitation and three Parks committees had a marked reduction of total members over a two- or three-year period. Likewise, for most committees, the number of members who reported being "active" (which usually meant, at a minimum, attendance at committee meetings, as shown in the second column of the table) shows a further contraction in engagement for most committees over time. Aside from the Solid Waste committee, which had a group of 13 active members, the number of active members on the other committees was six or fewer. The membership figures suggest that the community contribution to the committees was effectively restricted to a small core of members (i.e., those who were active).

The higher membership numbers around 2000 to 2002, relative to 2003/early 2004, can be explained mainly by the changing nature of collective action in the community over the duration of the PLUS Project. In the initial years of PLUS, the main thrust was the acquisition of new or improved infrastructure and services, such as the drains and potable water supply in the squatter colony. At that time, the prospect of receiving better-quality community amenities undoubtedly engendered interest and enthusiasm, particularly amongst the squatters, such that numerous individuals were highly motivated to join the committees. In the period from mid-2002 to 2004, when the focus of the PLUS Project shifted, to some extent, away from infrastructure acquisition towards community management and relationship-building with local government service providers and other actors, membership diminished, albeit for some committees more than others. Compared to the infrastructure phase, the more intangible and protracted process of community management and relationship-building that followed was accompanied by a lower level of participation on the committees.

As well, during the second half of PLUS, when the geographic focus expanded to the resettlement neighbourhoods, the need for community-level amenities, while compelling, was less acute than in the squatter area. Within the resettlement neighbourhoods, the motivation to join the committees probably did not have the same urgency, on the whole, that it did for many squatters. Thus, as the nature of collective action and the targeted neighbourhoods changed, so did the structure of incentives for committee involvement. In addition, in certain instances, it happened that some committee members were disappointed with the outcomes of collective efforts, which led to withdrawal of individuals or ceasing of activity. As an example, members of the E1 Parks committee, dismayed over a decision to construct a dhalao in the corner of the large park next to their neighbourhood, all dropped out.

The level of committee activity, as characterized in Table 3, shows considerable variability across the different committees, with waxing and waning of individual committees over time. The assessment of committee activity is qualitative, based on the range of initiatives undertaken and intensity of efforts. The Water committee, for example, entrusted with day-to-day responsibility for the water-distribution system in the squatter colony, maintained a consistently high level of commitment throughout the years of the PLUS Project. The Solid Waste committee, in taking on household source separation and composting programs, gained momentum in the latter stages. The Sanitation committee, on the contrary, remained at a fairly low level of activity throughout. The three Parks committees evolved from a moderate level of activity in their first year (2002), during which members contributed to the park redevelopment, to a near-dormant state in the successive years.

All committees had working relations with external actors which, as listed in the table, were principally with local government service providers relevant to the various committees. The extent of private sector involvement was minimal, confined to the Solid Waste committee's collaboration with informal sector waste pickers in the vicinity. Interaction of committees with government agencies and officials was of two types: (1) the enlisting of official cooperation and requests for bureaucratic approvals associated with the infrastructure-related projects, which typically occurred during the planning and implementation phase; and (2) efforts related to advocacy for better-quality services, which were more ongoing. Concerning the second mode of interaction, all of the committees filed petitions from time to time for the purpose of voicing complaints or making specific requests (which, as described in Chapter Nine, was the conventional channel of communication from the community to service providers). A couple of committees, namely, Parks and Solid Waste, actively promoted face-to-face dialogue with local government officials as part of their relationship-building and advocacy work, extending invitations to their meetings in the community; actual turnout of government officials, however, was infrequent (i.e., two or three meetings between 2002 and early 2004 for each of the two aforementioned committees).

While interaction between the committees and government service providers was, on balance, sporadic, the Solid Waste committee, especially, endeavored to establish constructive relations with area officials from the MCD Conservancy and Sanitation Dept.(CSD). In this regard, the Solid Waste committee, with the assistance of PLUS staff, organized a fact-finding trip to Mumbai in March 2002 to learn first-hand about community-based waste management

initiatives in the city with a view to replicability in Sultanpuri. The group making the trip, referred to locally as an "exposure tour," was comprised of community members, CSD representatives, and PLUS staff. Funding, including expenses for the CSD employees, was provided through the PLUS Project. Apart from the informational value, the spirit of the exchange was that of team-building. In a similar vein, the Solid Waste committee also hosted workshops periodically with CSD officials in the community to inform them about the committee's initiatives in source separation and composting and to seek their cooperation. Along with a cooperative stance towards government service providers, several committees (Water, Parks and Solid Waste), in order to bolster their advocacy efforts, asserted their rights under the Delhi Right to Information (RTI) Act to access official records concerning the sanctioned level of services in their community.

The form of leadership varied among the committees. In the case of two committees (Water and Drains), leadership was shared fairly equally between committee members and the PLUS staff; both of these committees had identifiable leaders from the community who were chosen by their fellow members. A third committee (Sanitation) did not have a designated leader from the community, nor much input from PLUS; leadership, rather, was communal, informally rotating among the core members according to who was available at any given time. A fourth committee (Parks E1) did have a leader for a period of time, but the woman quit when the dhalao was constructed near her house. A fifth committee (Parks E7) had someone who was known as the leader, but the extent of this person's role was past recruitment of members from his neighbourhood and he was no longer active. The two remaining committees (Parks E6 and Solid Waste) did not have anyone from the community in a leadership position; instead, members were supported and guided by the PLUS staff. Consequently, while the activities of the committees were driven by the needs and priorities of the community, the local organizations were mostly led by, and dependent on, the PLUS staff. During the time of my fieldwork in 2003/early 2004, only the Water committee, in my estimation, had what could be called a strong community leader, that is, someone who was obviously dedicated to the objectives of the committee and demonstrated that commitment through action. Nonetheless, as the project was winding down in 2004, the PLUS staff was of the opinion that a few committee members were, indeed, emerging as future leaders (Saahasee, 2004).

Consistent with the pattern of leadership, the process of decision-making on the various committees was essentially group- based, representative of the views of committee members

and PLUS staff who were facilitating. From the community side, those contributing to decisions were effectively the active members who regularly attended meetings, as opposed to the entire membership at large. Generally speaking, most matters before the committees were put to discussion at meetings before arriving at a consensus; where consensus could not be reached, the community leader or PLUS staff tended to have the final say. Voting on decisions was not utilized by any of the committees. Virtually all committee members interviewed reported that they were able to talk freely and make suggestions at meetings, irrespective of caste, religion, gender, age, and other social differences. Only one committee member from the Water committee expressed the sentiment that his opinions were not respected at meetings, although my sense is that this related to a personal conflict between him and the community leader.[18] All told, however, committee decision-making appeared to be participatory and not dominated by any individual or social group in the community; the process, in other words, was along democratic lines which, in itself, would be beneficial for collective action.

Finally, data were collected on the frequency of meetings held by the different committees. Meetings were both informal and "formal." Informal meetings were convened by the committee members themselves, took place in the community, and were not attended by PLUS staff. On account of the literacy issue, members did not keep minutes at these meetings. The more formal meetings were organized by the PLUS staff, held at the project office, and involved minute-taking. Formal meetings were mainly devoted to strategic planning, formation of action plans, and review of progress made; it was at these meetings that government officials occasionally sat. Informal meetings, on the other hand, revolved primarily around implementation and day-to-day activities. As shown in Table 3, four of the seven committees had the formal type of meetings every one or two months during the period 2003/early 2004, while the other three did not. Two of the committees (Water and Sanitation) had informal meetings, either weekly or bi-weekly, which is indicative of some degree of autonomy and momentum, apart from the direct involvement of the PLUS staff. At the same time, the fact that the majority of committees met as a group only when directed by the NGO suggests that a fairly high level of dependency existed.

[18] Committee member interview #6

10.3 Outcomes of Collective Action

This section introduces the various activities undertaken by the environmental committees and assesses the overall contribution of the community, Saahasee, government agencies, and other external stakeholders. The various activities taken up are summarized in Table 10.4 below.

10.3.1 Description of Initiatives

Water Supply:

1) Community-based water-distribution system in squatter colony

Prior to the PLUS Project intervention in 2000, residents in the squatter settlement had faced an acute shortage of potable water, restricted to non-potable water from two handpumps and a small amount of potable water from an illegal connection to a municipal water hydrant in the E6 resettlement colony (adequate for 10 families or less). Under existing policy of the Delhi Jal Board, individual households in the squatter settlement were not entitled to legally sanctioned water connections. To overcome the water supply problem, an arrangement was worked out between the squatter households, Saahasee, and the Delhi Water Board for provision of community water connections to the facilitating NGO (Saahasee), which would be handed over to a registered CBO over a period of two years. Under the plan, four communal water hydrants were installed in the squatter settlement in early 2002, at locations that were decided upon by the community. The squatters agreed to pay for the water (Rs.10 per month per household) and devised their own collective payment system, with sanctions for non-paying households. The squatters also formulated their own rules for use of water from the shared taps (to be discussed in detail in the final section of the chapter). The community water-distribution system is managed and operated by the Water Committee, with assistance from PLUS staff.

This type of community-managed water distribution system is unusual in Delhi insofar as most squatter settlements do not have access to municipal piped water or else have unauthorized (illegal) connections. A number of squatter settlements, on the other hand, do receive free municipal water. The potable water project in the E6 squatter settlement received official recognition as a "Best Practice" at a conference in Delhi organized by the Delhi Water Board.

Table 10.4. Water Supply Initiatives in Sultanpuri

Initiative	Initial Situation, Timeframes and Outcomes	Actors	Level of Community Involvement and Types of Participation	Success or Failure?
Potable water supply	Lack of potable water supply in E6 squatter settlement (no municipal connections) 2000: Micro-planning 2001: 4 public taps constructed by Delhi Water Board in squatter settlement	* Community - E6 squatter settlement * NGO - Saahasee * Government - Delhi Water Board (DJB)	High-level involvement: * Participation in micro-planning and needs identification * Monitoring of construction * Formation of 4 community water committees - all in E6 squatter settlement * Community water usage rules * Cost recovery (Rs. 10 per household per month) * Local residents make collective payments to DJB	Partial success: * A community-managed water distribution system, though serious free-rider problem * Official recognition as a "Best Practice" by the DJB * Cost recovery of water in a Delhi squatter settlement is innovative
Rainwater harvesting	Lack of non-potable water for local residents as a result of groundwater depletion (community has a number of public hand-pumps) 2000: Micro-planning 2001: Government builds new community centre/ rainwater harvesting structure	* Community - E1, E6 and E7 * NGO - Saahasee * Government - Slum Wing, Municipal Corporation of Delhi (MCD) * Government - Parks Dept, MCD	Low-level involvement: * Participation in micro-planning * Rainwater harvesting systems at community centre and park are demonstration projects * No direct involvement in monitoring and maintenance of facilities * Participation in water-related education and awareness programs	Success: * Rainwater harvesting systems have demonstration value as well as utility in restoring local groundwater * Rainwater harvesting systems very unusual in Delhi slums

Sanitation Initiatives in Sultanpuri

Initiative	Initial Situation, Timeframes and Outcomes	Actors	Level of Community Involvement and Types of Participation	Success or Failure?
New Public Toilets	Local residents avoided using old community toilets because facilities were poorly maintained and non-functional at times; many residents used local park as open toilet instead Aug 2000: Micro-planning 2001: New public toilet complex constructed in the community	* Community - E1, E6 and E7 * NGO - Saahasee * Government - Slum Wing, Municipal Corporation of Delhi (MCD) * Japan ODA (funding under Yamuna Action Plan)	Low-level involvement: * Participation in micro-planning and needs identification * Cost recovery - user-pay system (Rs. 1 per visit for men and women, children are free) * Facility managed by paid caretakers from outside the community	Partial success: * Much-improved community toilet facility * Fewer residents using park as open toilet * Problems with vandalism and harassment of women in and around facility * Some households find the facility expensive to use
Community Drains	Unsanitary conditions from clogged and garbage-choked open drains in front of dwellings; government sanitation workers did not visit the community on a regular basis; many drains are difficult to clean as they are covered with walkways, work platforms and latrines Aug 2000: Micro-planning 2001: Education campaigns and clean-ups in community	* Community - E1, E6 and E7 * NGO - Saahasee * Government - Sanitation Dept, Municipal Corporation of Delhi (MCD) * Private sanitation workers	Intermediate-level involvement: * Participation in micro-planning and need identification * Establishment of 2 sanitation committees - in E6 squatter settlement and E7 * Involvement in drain clean-up campaign * Pressurizing MCD Sanitation Dept for improved municipal cleaning * Some households have hired private cleaners	Failure: * Efforts to encourage residents who had built latrines over community drains failed * Ongoing tensions between residents with open drains in front of their dwellings and those who have covered their drains (making cleaning difficult) * Minimal improvement overall in condition of drains in community

Solid Waste Management Initiatives in Sultanpuri

Initiative	Initial Situation, Timeframes and Outcomes	Actors	Level of Community Involvement and Types of Participation	Success or Failure?
Source separation program/ community composting	Low level of source separation at household level in community, especially regarding organic waste; general problem of garbage strewn in lanes and accumulating in drains Aug 2000: Micro-planning 2001: Source separation and community composting programs implemented	* Community - primarily in E7 (200 households), also in E1 (50 households) and E6 squatter settlement (50 households) * NGO - Saahasee * Government - Works Dept, MCD * Private garbage collectors servicing some households	Intermediate-level involvement: * Participation in micro-planning and needs identification * Establishment of community SWM committee in E7 * Households, mainly in E7, practising source separation * Community composting (are residents directly involved in program?)	Partial success: * Some success in promoting source separation in community * Waste diversion (less garbage for municipal pick-up) * Waste recovery and re-use - organic waste is composted and used as soil additive in local park
Community infrastructure and advocacy for improved municipal garbage collection	Inadequate community garbage bin; infrequent and unreliable municipal collection from garbage bin Aug 2000: Micro-planning 2001: Government builds new, covered masonry bin and composting pits	* Community - E1, E6 and E7 * NGO - Saahasee * Government - Works Dept, MCD * Private waste pickers at community collection point	Low-level involvement: * Participation in micro-planning and need identification * Pressurizing MCD Works Dept for better garbage collection from community point	Partial success: * Improved community infrastructure * Little or no improvement in municipal garbage collection service

Park-related Initiatives in Sultanpuri

Initiative	Initial Situation, Timeframes and Outcomes	Actors	Level of Community Involvement and Types of Participation	Success or Failure?
Park planning and development	Local park was degraded and lacking in facilities Aug 2001: Micro-planning 2001: Park re-designed and redeveloped as a multi-purpose open space with raised concrete walkways, a children's playground, cricket pitch, small amphitheature, nursery and plantings, water harvesting system	* Community - E1, E6 and E7 * NGO - Saahasee * Government - Parks Dept, MCD; Horticulture Dept, MCD * Private sector - Landscape architects	Intermediate-level involvement: * Participation in micro-planning and needs identification * Establishment of 3 community parks committees - one each in E1, E6 and E7	Partial success: * Local park transformed from neglected state to a multi-purpose community asset * Park not used as an open toilet as before * Community involvement in municipal park planning in Delhi is unusual * Many plantings around park not maintained
Appropriate park use	Park was used as an open toilet and meeting place for local drug users; open space was otherwise underutilized; lack of alternate open spaces in and around the community Park is now used as a multi-purpose facility; use of park as an open toilet has diminished	* Community - E1, E6 and E7 * NGO - Saahasee * Government - Slum Wing, MCD; Horticulture Dept, MCD	Intermediate-level involvement: * Generally appropriate use of park by different user groups in the community * Local residents carry out monitoring role through park watch committees	Partial success: * Much better use of open space * Residents appear to have developed a sense of owner- of the park * Some vandalism problems persist (e.g., amphitheatre)

2) Rainwater harvesting program

The local community centre, built by the municipal government during the PLUS Project, provides space for a daycare and skills training and doubles as a rainwater harvesting facility. The PLUS Project, with participation from the Water Committee, collaborated with the government authorities to modify the original design to include the rainwater harvesting infrastructure. The building is designed to collect water from the building's rooftop and paved grounds and treat it in an underground filtration system. At present the water is used for groundwater recharge in the area (water is not collected for potable use). Because of the small-scale, the project is, however, a demonstration project with a fairly minimal degree of community involvement in monitoring or maintenance. Nonetheless, the demonstration value is important as there are very few rainwater harvesting structures in Delhi slums and this may be one means to improve local groundwater and augment potable water supply. While the Centre for Science and Environment (a national NGO based in Delhi) and various government bodies have been promoting rainwater harvesting in different parts of the country for some time, the emphasis to date has been on rural areas and middle-class and institutional applications in urban areas.

Sanitation:

3) Appropriate use of the community toilet complex

Also before commencement of the PLUS project, Sultanpuri had an old, dilapidated community toilet complex that had numerous problems such as lack of water for flushing, inadequate electricity supply, few toilet seats, clogged toilets, and poor maintenance. Consequently, many residents did not go to the facility and used the local park as an open toilet instead. In 2002, a new community toilet complex was constructed with Japanese funding under the Jamuna Action Plan (the Jamuna being the river flowing through Delhi). The new toilet complex is pay-and-use – men and women pay Rs. 1 per visit and children pay 50 paise (half a rupee) (CHECK FEES). The complex is maintained by paid caretakers who collect the fees. Some difficulties have occurred concerning non-payment and women being harassed on the site. The facility has also been vandalized, with metal components and other items being taken. The Sanitation Committee, together with PLUS staff, has been working with the community to encourage people to avail themselves of the facility and comply with fee-paying

so that the complex will be maintained properly. Efforts are also being made to discourage vandalism and harassment of women.

4) Appropriate use of community drains and advocacy for improved municipal drain-cleaning

Government sanitation department workers are supposed to clean the drains that are situated in front of dwellings in the squatter colony and resettlement areas on a regular basis, but service was erratic in the study community. The reason for this is partly because government workers had difficulty accessing drains in places over which latrines and other structures had been constructed. Drain-covering was prevalent in the Seekligar area in E6 where, due to space constraints, the home-based iron trade is generally carried out in front of houses on platforms over the drains. In other lanes in the community, drains are not well-constructed or maintained and, as such, water stagnates or pools up. Clogging, moreover, occurs due to solid waste entering drains. The Sanitation Committee attempted to motivate residents to open up their drains, but encountered opposition, especially from the Seekligar residents. The Seekligars were disinclined to take down their household latrines (or connect them to the sewer) or remove their work platforms.

The Committee has promoted other appropriate sanitation practices, such as proper disposal of solid waste in order to prevent blockage of drains. Furthermore, the Sanitation Committee has advocated for improved municipal drain-cleaning services, including filing a Right to Information (RTI) request for information about the number of drain cleaners assigned to their area for the purpose of monitoring service.

Solid Waste Management:

5) Promotion of household source separation and community composting

Under the PLUS project, improvements were made to the community waste management infrastructure. The old collection point, an open bin, was converted to a *dhalao* (a larger, covered masonry structure). Brick-lined pits have been dug on two sides of the dhalao for composting biodegradable waste. The Solid Waste Management Committee has been working with the community to implement a household source separation program (recyclables, biodegradable waste, non-biodegradable waste). The program has been primarily undertaken so far in the E7 and, to a lesser extent, in E1 and E6, for a total of about 300 households. Moderate success has been achieved so far in promoting household source separation. In the

composting program, committee members separate waste at the dhalao into biodegradable, non-biodegradable, and recyclable factions. Biodegradable waste is placed into the pits (a 6-month-long process). PLUS has also experimented with different types of waste collection carts to find an optimal design with separate compartments for biodegradable, non-biodegradable and recyclable waste, and is acceptable and affordable to private waste collectors.

The original intention was to use the compost as a soil additive in the park; however, municipal workers from the Horticulture Department were not willing to use the community-produced compost because, according to an NGO source, they received kickbacks from another supplier (Gupta, 2004). Committee members opted, thereafter, to market the compost themselves to schools, other institutions, and nurseries.

6) Advocating for improved garbage collection services

Municipal collection of solid waste from Sultanpuri is also irregular and garbage can lay uncollected at the community collection point for weeks. Committee members established ongoing relations with government officials to pressure for better-quality service.

Municipal Parks:

7) Park Planning and Development

The local park, which is bordered by E1, E6 and E7 on three sides, is about 2 acres in size. Previous to the PLUS project, the park was commonly used as an open-air toilet for residents, a home for pigs and cattle in the area, and a hang-out for local drug addicts. The park had little in the way of infrastructure or facilities. Under the PLUS project, the park has been upgraded following a joint planning effort involving community members, PLUS staff, MCD departments, and landscape architects. With the participation of the three Parks Committees, the park has been redesigned as a multi-purpose area for different user groups. One end of the park has been provided with children's playground equipment. A network of raised, paved walkways/platforms was constructed for residents to sit and relax and as a work space with natural light for women to use for home-based piece-work such as embroidery. Another area is reserved for a cricket pitch. An open-air amphitheatre has been constructed for community meetings. A corner of the park is used by the Horticulture Dept. of MCD for raising crops and seeds.

8) Promotion of appropriate community use and improved relations with the Horticultural Dept.

The park has several in-ground shafts, designed for water infiltration to improve groundwater recharge. A number of these structures have been damaged, however, from accumulation of solid waste. Development of the park has had a few other setbacks to date. Many plants and saplings that were planted around the perimeter of the park have died due to infrequent watering. Apparently, the Horticulture Dept. was to ensure regular watering, but this did not happen. The community amphitheatre has sustained damage from local people removing bricks. The MCD was to provide two watchmen to patrol the park at night but, after several months, the watchmen disappeared and were not replaced. The Parks Committees, after the initial planning stage, have been largely dormant, but maintained relations with Horticultural officials, continued to lobby for park watchmen and a police sub-station in the vicinity to improve security, and submitted an RTI request.

10.4 Case Study of the Community Water-Distribution System

As discussed earlier, access to potable water had been identified as a priority at the initial community planning exercise that took place in Sultanpuri in August 2000. Follow-up community meetings to address the issue, also organized by PLUS staff, were held in the squatter colony in May 2001. Participants at these meetings were local residents, Delhi Jal Board (DJB) officials, and a water infrastructure consultant, with PLUS staff acting as facilitators (Sharan, 2001). After considering different technical options (e.g., underground reservoir, above-ground Sintex water storage tanks), community members decided, as a group, on public hydrants as their preferred choice of infrastructure. Due to low water pressure in the vicinity, the proposed system necessitated laying a pipeline to the DJB overhead water tank approximately 500 m. away. The result of community planning was a community-NGO-government initiative, in which the squatters were to collectively pay for water consumption and manage the local system, Saahasee was to cover the infrastructure costs, and the DJB was to provide the water supply.[19] Due to the illegal status of the squatter colony, official authorization of municipal water was made to Saahasee rather than the residents themselves,

[19] The total cost for infrastructure and related road-cutting was Rs. 536,000 (Cdn $ 16,232) or about Rs. 1000 per capita (Sharan, 2001).

with the intention of the PLUS Project being to transfer the water connection to a registered CBO later on.

Implementation of the community management aspect commenced with the PLUS-led organization of the squatters into a water committee, whose members thereupon chose a leader from amongst themselves. The leader was a man who was locally-acknowledged as a pradhan in the squatter area although he resided, not in the squatter colony, but across the street in the E6 resettlement neighbourhood. He had a son living in the squatter area, however. All other committee members were from the squatter colony. Aside from choosing the type of infrastructure, the committee was given the task of deciding on the location of the public hydrants, which were four in number, in the squatter area; the committee opted to space the water points throughout the settlement to serve the different lanes in an equitable manner. In addition, the committee assumed responsibility, with assistance from PLUS staff, for the day-to-day management of the system, including the collective payment from households to the DJB, record-keeping, distribution of water, and maintenance of hydrants (Sharan, 2001). The water system became operational in early 2002 and the agreement, as understood by the PLUS Project, was that each household in the squatter colony would pay a flat rate of Rs. 10 (Cdn $0.33) per month.[20] Having their own pipeline to the community, the water committee could control water access by opening and closing a valve under the road beside the settlement, which was attended to by the leader or his son. The committee, accordingly, decided to make the water available for a period of about one hour daily, usually beginning around 4 PM.[21]

10.4.1 Community Management and Ostrom's Institutional Design Principles

Although Ostrom's principles of institutional design have been applied exclusively in the literature to common property resources in rural settings, she contends that the set of principles are applicable to other contexts insofar as the problems of collective action are likely to be similar (1990). In the discussion that follows, the community water-distribution management system is described and analyzed in terms of the principles put forward in Dolšak and Ostrom (2003; 21). I chose Ostrom's principles of institutional design as the analytic lens, rather than a critical commons approach, for the reason that my main interest in the local water-distribution system is the overall functioning and sustainability of the grassroots institution. Issues of

[20] Committee member interview #1; Saahasee, 2003a
[21] Committee member interviews #1 and 6

inequality and social exclusion, central to critical commons scholars, were less salient to my research.

Rules are devised and managed by resource users:

In accordance with the above principle, the water committee formulated its own set of rules on behalf of the community. The rules, which pertained to water use restrictions, were clearly posted on a sign at each of the four communal hydrants, as follows:

1) At the standpost, you can't wash clothes, crockery (dishes) or latrine mugs.
2) At the standpost, you can't take a bath.
3) If anyone is found doing these things, you will have to pay a fine of Rs. 100 and stop taking water for 10 days.[22]

Thus, filling of water vessels was the only activity permitted at the standposts, and water for non-potable uses was to be taken at the handpumps in the community. The other important rule was for water payment – each household was to pay Rs. 10 at the beginning of each month to the committee, which would then be forwarded as a lump sum to the DJB.

Procedures exist for revising rules:

The community management system, moreover, exhibited some capacity to change the rules as it went along to respond to problems and better achieve its goals. Initially, for instance, residents were left to their own devices as far as the amount of water that residents obtained at the standpost in their area on a given day; when it was realized, early on, that a few individuals tended to monopolize the water supply (given that the daily period of availability was limited), from time to time, the water committee directed everyone to fill a maximum of two to three containers daily, thus reducing arguments and ensuring that everyone had fair access. Furthermore, when the committee ran into difficulties related to collection of monthly payments, the leader decided to implement a new rule whereby households would be subject to a late fine of Rs. 1 per day.[23] In short, then, the committee did, on occasion, modify the rules

[22] Committee member interview #7
[23] Committee member interview #1

with the aim to make the system work better; it was the community adherence to the rules, rather than their formulation, that proved challenging (to be elaborated below).

Compliance with rules is easy to monitor:

Monitoring of the rules around water use was relatively straightforward and low-cost in this situation on account of the public nature of the activity and the size of the community. In the late afternoon when the water supply was made available, residents congregated around the hydrant in their area to await their turn and one or two committee members were usually present to keep an eye on whether anyone did not abide by the rules. The leader, moreover, periodically visited each of the water points and was confident that, were someone to break the rules, the neighbours would inform him.[24] Due to the fact that the leader controlled the period of daily water availability, it was not possible for anyone to "steal" water. Monitoring was easy to accomplish, furthermore, for the reason that the community was small (160 households) and, around each water point, at least, neighbours would have all known one another; as such, individuals who might wish to "cheat" could not do so without detection.

As far as monitoring for regular monthly payments from households, the water committee kept a ledger and issued receipts. Nevertheless, record-keeping was not without difficulty, as lack of literacy and numeracy skills on the part of committee members who maintained the ledgers, as well as in the community generally, led to some misunderstanding and confusion. Accordingly, monitoring of water payments was higher-cost, involving extra effort and time and, sometimes, conflicts.

Rules are enforceable:

In terms of enforcement of the water use rules, the majority of community members were compliant. When a few people were tempted, now and then, to use water for prohibited purposes or to monopolize the limited supply, committee members and neighbours relied on verbal counselling and informal sanctioning to dissuade them.[25] Cooperation was usually achieved in this way. In two or three instances, the leader applied the penalty of Rs. 100 when individuals flaunted the rules, such as in taking a bath at a standpost, and directly challenged

[24] *Committee member interview #1*
[25] Committee member interviews #3 and #5

his authority.[26] Overall, though, the combination of verbal sanctioning and threat of fines appeared to be effective regarding water use, in that inappropriate activity was constrained.

Enforceability of the monthly water payment fees of Rs. 10 from households, on the other hand, proved to be a major dilemma. According to the committee leader, the proportion of non-paying households in the community fluctuated between 30 % and 50 % during 2003.[27] Indeed, according to the water committee meeting minutes, the monthly fees seem to have been an issue since the beginning in early 2002 (Water Committee, 2002; 2003). Imposition of the late fee of Rs. 1 per day, moreover, did not appreciably improve compliance. Overall, the communal financial commitment for water consumption amounted to a classic free-rider problem in that the non-paying households probably preferred that others pay, rather than themselves, in order to keep the system viable and operating. Because the community was, under the partnership arrangement, collectively responsible for the water payment, the free riders were, in effect, jeopardizing the continued access to municipal water for all households were the DJB, at some point, to consider the agreement breached and cut off the water supply.

The committee leader, who had taken on most of the responsibility for collecting payments in the community, spent a considerable amount of time going from house to house to collect the monthly fees (ranging from several hours a day to entire days). Other committee members occasionally accompanied the leader on his rounds and lent support, especially when confronting householders who were in arrears. When I interviewed the leader in late 2003, he stated that he was "fed up" with the lack of compliance shown by many households.[28] Apart from trying to collect fees, the man was investing a good deal of time in counselling the squatters on the importance of meeting their financial commitment so that the DJB would not terminate the water supply. Nonetheless, faced with chronic non-payment from households in one particular area of the colony the leader, with the backing of his fellow committee members, disconnected the local hydrant (leaving three in operation) mid-way through 2003. The households that had their water supply cut off did not make restitution and, as of early 2004, the hydrant remained disconnected.

Despite the poverty status of the squatters, non-payment was not, in most instances, because the fees were excessive; as noted in Chapter Eight, the cost of Rs. 10 per month

[26] Committee member interview #1
[27] Committee member interview #1
[28] Committee member interview #1

represented only about 0.3 % of the average household income in the settlement.[29] There probably were a few households in dire straits financially, for whom even Rs. 10 would have been onerous, yet the large majority would have had the capacity to pay. As such, it was a situation where most of the non-contributing households were, in my view, simply unwilling to pay.

Sanctions are graduated:

The community management system featured a form of graduated negative sanctions regarding inappropriate use of water at the hydrants and non-payment of monthly fees. As mentioned earlier, with respect to water use, the initial sanction, consisting of informal counselling or a rebuke from committee members and neighbours, was followed up with the Rs. 100 fine and suspension of water privileges for 10 days. As far as non-payment of household fees, imposition of sanctions similarly occurred in two stages, that is, counselling at the outset and, in the event of longstanding shirking, denial of access to water. Although the community system of sanctions was graduated, Ostrom (1990) might argue that it was not graduated enough. Penalties at the first stage are modest, whereas those at the second stage are severe. The fine of Rs. 100, for example, would be equivalent to one or two days wages and, as such, quite punitive. Likewise, being cut off from water at the standposts would cause certain hardship; while some squatters might be able to obtain water from friends or relatives in the settlement, others would have to scrounge for water elsewhere.

The rationale behind graduated sanctions, Ostrom (1990) contends, is overall lower costs to the group; in other words, the low-level sanctions, which are less costly, are applied initially and the progressively higher-level sanctions, which are more costly, are imposed only when necessary. In the water-distribution case, higher-order sanctions were costly to the water committee, in the sense of the time and energy expended at meetings and in the community to deal with the more serious incidents of non-compliance. The severity of the second-stage penalties actually made them problematic to implement; the committee leader, knowing the hardships involved, was reluctant to impose the large fine or deny access and only did so in extreme circumstances.[30] Meting out the stiffer punishments, moreover, was costly to the leader personally, as an incident occurred in which he had been physically beaten for refusing

[29] See Chapter Nine, footnote #14, for an explanation of the calculation of the monthly water payment fees as a percentage of household income.
[30] Committee member interview #1

someone water.[31] Perhaps, and this is just speculation, the system of sanctioning might have been more effective and proven less costly, on the whole, had there been an intermediate-level punishment, which would have underscored the importance of compliance with the rules and yet was not as difficult to invoke.

Adjudication is available at low cost:

Ostrom's principles further prescribe that adjudication to resolve inevitable conflicts between participants ought to be accessible and low-cost, as well. In the water-distribution system, the role of adjudicator was mainly vested in the committee leader who, as a pradhan in the squatter area, had a certain status and moral authority. Disputes that arose, as explained previously, were mostly between the users of the system and water committee members, rather than between the users themselves, and usually concerned the monthly water bills. Conflict resolution was accessible in that householders were able to meet face-to-face with the leader in the community; such disputes were settled informally and did not involve any direct costs to households. However, like the matter of sanctions, adjudication was costly for the water committee and the leader, in particular, who devoted a substantial amount of time to settling disputes and, in so doing, faced the brunt of the criticism and anger.

Monitors and other officials are accountable to users:

Based on my interviews with members of the water committee, they did take their duties seriously and, therefore, it would have to be assumed that they felt accountable to their fellow residents. My sense is that the committee members, by and large, had a sense of pride in their role in the local management system and, consequently, a personal incentive to make it work, above and beyond their share of the water supply. The actions of the committee members, moreover, were indicative of a sense of responsibility to the community; the work of the committee was oriented toward providing the collective good in an equitable manner to all households, within the framework of the rules; to my knowledge, no member acting opportunistically, such as in monopolizing the water supply. Since all committee members, with the exception of the leader, lived in the squatter settlement (and the leader, who lived nearby, spent considerable time there), they were answerable to their neighbours on an everyday basis. Were the water-distribution system to fail, committee members would likely

[31] Committee member interview #3

be found culpable, along with the PLUS staff and DJB, depending on circumstances. In addition, should the members of the committee have not conducted themselves in the interests of the community, they all stood to lose in terms of their reputation, which would have mattered in the small settlement.

Nonetheless, towards the end of 2003, a segment of the community (probably a minority) made a concerted effort to hold the water committee leader to account for the reason that they believed that the leader was cheating them, that is, absconding with their monthly fees. This view was, I believe, largely the doing of another pradhan in the squatter settlement who, possibly motivated by jealousy, spread rumours and falsehoods about the water committee leader (also a pradhan), convincing a number of households to not make any further payments to the collective fund. Quite possibly, the low level of literacy in the settlement, which caused misunderstanding around the water bills, may have contributed to the fears and mistrust. In this context, the community could not "fire" the leader, and nor did the squatters seem to have an internal mechanism in place, like a community hearing, to resolve the conflict between the principals. Instead, what happened was the group of dissident residents went to the local councillor to express their dissatisfaction with the water committee leader, in the hope that this powerful individual would intervene. I was not privy to that meeting, but learned that the committee leader did retain his position afterwards. So, from my perspective, committee members were accountable to the community, judging by their motivation and actions; the community, it would have to be concluded, asserted themselves to demand accountability from the leader; however, the means by which the faction within the community demanded accountability was clearly acrimonious.

Chapter Eleven: Conclusions

This last chapter summarizes my research results about Sultanpuri and the PLUS Project, and discusses several larger issues that the case study raises. The chapter is organized into three parts. The first section presents, in turn, the main findings for the three research questions that have shaped my enquiry and formed the focus of the empirical chapters. The second section comments on the methodology used, in particular, what worked well and what could have been improved. The third and final section considers, more generally, the usefulness of the social capital construct in the context of community-based development.

11.1 Revisiting the Research Questions

11.1.1 Environmental Conditions

Research question #1: *What are the household- and community-level facilities and services, practices, and problems regarding environmental management in low-income settlements in Delhi (i.e., water supply, sanitation, solid waste management, and use of open space)?*

I found that Sultanpuri has a basic complement of environment-related infrastructure, with the situation being comparatively better in the resettlement area than in the squatter colony. Most of the facilities are communal, such as the public taps, handpumps, open drain network, toilet block, waste collection point, and municipal parks. In addition, Sultanpuri has a rainwater harvesting structure and composting pits, which are unusual in low-income settlements in Delhi. At the household level, many houses in the resettlement neighbourhoods in Sultanpuri have individual water connections and latrines, whereas the squatter dwellings do not. Another household difference pertains to water storage capacity, with some families having only a few small containers and others equipped with large-size tanks. In the resettlement area, part of the environmental infrastructure, including the drainage system, individual hydrants, handpumps and parks, dates from the late 1970s when the settlement was established. The remainder of facilities, both in the resettlement neighbourhoods and squatter colony, are more recent upgrades from government programs (e.g., the toilet complex) and the PLUS Project (e.g., public taps, central waste bin, rainwater harvesting structure and composting pits). Given these improvements, infrastructure in Sultanpuri, though not at a high level, would be comparable or superior to the majority of slum communities in the city.

Most environment-related services in the community are provided by local government bodies like the Delhi Jal Board (DJB) and Municipal Corporation of Delhi (MCD), although the informal private sector also plays a role. By and large, the standard of municipal services provided to the community is low. For instance, Sultanpuri receives an average of 47 litres of water per person per day from the DJB, about one-fifth of the city-wide, average allocation of 250 litres per person per day. Water supply is quite intermittent, being available once per day for 20 minutes to one hour. Furthermore, the quality of municipal water is suspect because, while treated, the Jamuna River, which is the main source, is heavily polluted and the leaky distribution system in Delhi results in cross-contamination with sewage, industrial wastes, and other pollutants. Nevertheless, as shallow groundwater is not considered suitable for potable use, residents of Sultanpuri are reliant on piped water for drinking and cooking. Other government services to the community, such as drain cleaning, garbage pick-up, and upkeep of area parks, are similarly poor, mainly due to irregularity of service. For a portion of households able to pay fees or in kind, the informal sector makes up for lack of municipal capacity, to an extent, by means of door-to-door collection of garbage and recyclable items, as well as drain-cleaning. Informal sector waste pickers also recover recyclable materials at the central waste facility, thereby decreasing the amount of garbage for municipal disposal.

Regarding local practices, or use of facilities and services in Sultanpuri, household tasks such as water provision, toilet-cleaning, hygiene education, waste separation and garbage disposal, are typically gendered, with women carrying out the bulk of the work and girls assisting. Men and boys have a minimal role. Amongst those responsible for environmental management in the home (mostly women), considerable awareness exists about the connection between water quality and personal health; likewise, knowledge is widespread in the community about the relationship between the cleanliness of drains and health. Notwithstanding the general understanding of the importance of water quality, few residents purify water in the home on account of the added expenditure involved. Aside from household water treatment, the direct costs associated with facilities and services are not excessive, as a rule, for community members. To illustrate, the charge for piped water obtained from a private connection in the resettlement area amounts to just over 1 % of average household income, and the cost of water from the communal taps in the squatter colony is less than 0.5 % of average household income.

As far as problems encountered in the community related to environmental management, several were evident. First of all, residents felt that conditions in their settlement were, on the whole, poor, citing the clogged drains, litter, flies, mosquitoes, foul smells, and the lack of amenities in the parks. Sentiment prevailed that the degraded environment in the settlement was adversely affecting their health, well-being and quality of life. Secondly, a history of tensions existed between the community and government service providers in the area. Community members were clearly frustrated with the quality of services they received and tended to perceive municipal employees as shirkers and unresponsive to their concerns. Also, resentment existed over bribe-taking for supposedly free services such as drain-cleaning. At the same time, government officials held that residents did not know how to properly utilize and maintain the infrastructure and facilities, nor were they appreciative of their efforts. This viewpoint was not unfounded, insofar as certain community practices, like indiscriminate dumping of waste, use of drains and parks as an open-air toilet, and vandalism of public property, were detrimental to environmental quality. Both the government authorities and community were culpable, in other words, for inferior environmental conditions in Sultanpuri.

Thirdly, intra-community disparities were another facet of environmental problems in Sultanpuri. Using water supply as an example again, data collected from the random survey revealed a wide range in per capita daily consumption, from a paltry 6 litres to upwards of 180 litres. Given the brief period of water availability, such variation was largely reflective of variation in household capacity for collection and storage (i.e., the number and size of water vessels and/or tanks). Moreover, some households did not have basic necessities for waste management, such as a dustbin (small waste receptacle) or adequate space within the home to separate waste (i.e., into wet, dry and recyclable components). As mentioned above, although environment-related services were not, for the most part, unduly expensive, the cost of the pay-per-use toilet complex was substantial for families that did not have their own latrine, amounting to 5% or more of household income. A further dimension of intra-community inequality was the gendered nature of household environmental management which, in diminishing life opportunities and livelihood options for women and girls, can be seen as a form of oppression. Gender-based discrimination was also apparent in the sexual harassment of female teenagers, which restricted their access to public spaces such as the parks. Thus, notwithstanding that environmental conditions were mediocre in general, the associated impacts and difficulties were differentiated across the community.

11.1.2 Social Capital

Research Question #2: *What is the nature of community-level social capital, that is, social integration and linkage in Woolcock's (1998) conceptualization and, by extension, how predisposed are local residents for collective action generally?*[1]

The picture of Sultanpuri corresponds to a fairly elementary level of social capital, judging by a number of indicators employed to assess the structural and cognitive components, as well as horizontal and vertical dimensions. Looking at the horizontal aspects, or the concept of integration in Woolcock's model, the extent of associational membership, at about 24 % of households (or 7% of all adult community members), would have to be deemed on the low side. Affiliation was predominantly with CBOs established by Saahassee and, secondarily, indigenous organizations such as rotating savings groups. In the non-associational realm, informal networks were present in Sultanpuri, albeit typically small in size; average network size of random survey respondents, measured as the number of close friends in the community, was slightly less than one person, with 60% of respondents reporting having no close friends. In terms of the "usefulness" of personal networks in times of need, operationalized as the likelihood of borrowing money from community members, survey data were polarized, with roughly equal proportions of respondents confident that they could borrow as were sure that they could not. Other data measuring everyday sociability, defined as chatting with fellow residents, showed that such interaction was highly localized in respondents' own residential lanes. Sociability exhibited a degree of fluidity across social groups, more so along axes of caste, age, place of origin, and income level, and a lesser degree with respect to religion and gender.

Findings about local leadership provided additional insight into the horizontal structures. Leadership within the community is customarily vested in the *pradhans*, the locally-recognized "chiefs" or moral authorities within a specific lane or several lanes. In Sultanpuri, the pradhans were all men, middle-aged or older, who had lived in the settlement for an extended time. Through their counselling work and settling of family disputes, the pradhans helped to maintain the social order and, in this sense, contributed to integration; however,

[1] Note to Amrita and Virginia: I have revised the wording because the old question, I felt, was somewhat ambiguous (Old question: Under what conditions does community-level social capital, i.e., social integration and linkages in Woolcock's (1998) conceptualization, help or hinder CUEM effectiveness?)

these individuals were, for the most part, leaders of their respective caste members in the vicinity, not community members in general. On balance, the structural configuration of low associational density, limited informal networks, and insular leadership resembled a somewhat segmented, rather than closely-knit, community.

The random survey further suggests that trust, deemed a key component of cognitive social capital in the literature, was not in abundance in Sultanpuri. Generalized trust, for instance, appeared to be limited, considering that over half of respondents felt that "most people" could not be trusted. In terms of the amount of trust placed in certain groups in the community, levels were high within families and fairly high towards relatives, but dropped off noticeably regarding neighbours and pradhans. The random survey also explored the perceptions of community members concerning social cohesion which, in my usage, embodies the idea of accommodation of fundamental social differences such that cooperation between groups is possible and, hence, pertains to horizontal interconnectness. On this subject, almost two-thirds of survey respondents stated that social differences divided their community and caused problems to a "great extent," pointing to a lack of social cohesion.

Related to horizontal structures, the social fabric of Sultanpuri comprised various forms of behaviour, commonly thought of as anti-social, that are symptomatic of underlying issues such as poverty, unemployment, public health and gender relations. Findings from the random survey and anecdotal data reveal that such conduct was prevalent in the community; when asked about domestic abuse, sexual harassment, theft, vandalism, alcoholism, illegal drugs, and physical fights, the majority of survey respondents characterized every area of behaviour as a "big problem." Though we deliberately refrained from inquiring about the person's own household or lane, the broaching of these topics, especially drugs and alcoholism, in the community context evoked anxiety amongst some respondents and there were those who, understandably, opted not to respond. In light of Sultanpuri's reputation as a crime-afflicted part of Delhi, this darker side of community life was not entirely unexpected. The effects of anti-social behaviour on community-level social capital were detrimental in at least two important ways. The reservoir of human capital potentially available for the creation of social capital, for instance, was diminished because of domestic abuse, sexual harassment, drug abuse and alcoholism, all of which adversely impact on individuals and families. Further, the sense of public security and generalized trust that underlies freedom of movement and broad-

based social interaction was certainly constrained by rampant theft and vandalism, as well as fear of violent assault.

Accordingly, my research supports the argument in the literature regarding the inverse relationship between social capital and level of crime and violence in the community. This is not to deny that crime activity in Sultanpuri, specifically the organized gang element, represents a form of social capital since, presumably, it was based on strong within-group relations and thick trust in support of their collective objectives. But this kind of social capital, without a doubt, generated negative externalities for the wider community, a case in point being the local drug dealers who, in order to expand their operations, gave young children drugs for free to make them addicted and subsequently taught them to steal to pay for their habit. My contention, then, is that, notwithstanding what Putnam calls "perverse" social capital, the presence of crime and violence in Sultanpuri was definitely harmful for social capital at the community level. One final point is that community members believed that two caste groups, in particular, were behind most of the criminal behaviour in Sultanpuri: the Sikligars, a Sikh caste, and the Sansis, a Hindu caste. From my vantage point, it was difficult to ascertain the truth of the matter and members of these castes might well have been unfairly stereotyped. However, whether the Sikligar and Sansi castes were blameworthy or not, such opinion indicated a major divide in the community and, consequently, a lack of social cohesion as noted above.

Turning now to vertical relations, or linkage in Woolcock's terminology, Sultanpuri residents were, traditionally, in a subservient position to local government service providers. As mere recipients of municipal resources and lacking information on the standard of provision to which they were entitled, access to decision-making and dispute resolution channels, or the means to effectively sanction service providers, the community was, for all intents and purposes, relatively powerless to demand better-quality services. In this scenario, community members were, unfortunately, taken advantage of, in that the high government employee absenteeism rate and shirking on the job exacerbated the limited official allocation to the area and inferior environmental conditions.

Relations with local politicians, on the other hand, were clientelistic; as is the norm in low-income settlements in Delhi, Sultanpuri constituted a vote-bank for politicians from the Congress Party who presented themselves as champions to their constituents. While the politicians may have distributed individual favours and had a hand in collective benefits that

accrued to the community from time to time, my impression is that the relationship was primarily about dependency and control. Data collected suggest that these individuals had questionable scruples and used intimidation to gain and consolidate their positions of power, which is not uncommon in Indian politics. Referring to trust again, the random survey findings showed a very low level of trust towards both government employees and local politicians, which would seem to attest to the dubious quality of customary relations with these actors.

Lastly, for the community, Saahasee represented a new relation with an external actor and potential availing of different opportunities through the NGO. Saahasee's PLUS Project, which endeavoured to improve the lives of community members through collective action and partnerships with local government bodies, was an attempt to alter the status quo. Nevertheless, the process of change, despite good intentions, was not straightforward and led to partial achievements, about which I will elaborate below.

The overall pattern, then, of social capital in Sultanpuri, comprising longstanding forms of social interaction and, to a lesser extent, the more recent influence of Saahasee, was of limited integration and linkage. Regarding integration, social interaction in the community, while not anomic, was relatively segmented because interconnectedness occurred largely within, and not between, different social groups. The ties that defined groups were predominately ascriptive, that is, oriented around family and kin, gender, caste, religion, place of origin, and language. A degree of permeability existed between groups, like the everyday sociability of individuals at the lane level and, through the CBOs established by Saahasee, the furthering of associational life based on elective relations. In other respects, though, social divides were apparent, such as entrenched forms of oppression against women and the general animosity towards the two castes believed responsible for local criminal activity. To use the terminology of community-level social capital, Sultanpuri exemplified a lot of bonding social capital within groups and comparatively less bridging relations between dissimilar groups. In terms of linkage, apart from Saahasee's involvement, the nature of customary relations with external actors, being essentially exploitative, was not conducive to positive change for the community.

Therefore, assuming that the propensity for collective action is proportionate to the available "stock" of social capital, as theory maintains, the inherent capacity of community members in Sultanpuri to act together would seem not overly high. The main obstacles to working collectively in a community-wide fashion are apt to be social segmentation, low

levels of generalized trust, and the problem of crime and other anti-social activities. Even at the lane level, cooperation between households cannot be assumed because many residents were wary of their neighbours.

11.1.3 Collective Action

Research question #3: *How effective are collective action efforts to improve environmental conditions in low-income settlements, and to what extent are communities able to overcome typical problems of collective action (e.g., free riding, dealing with conflicts)?*

Care India's PLUS Project, carried out in Sultanpuri between 2000 and 2004, was an experiment in collective action whereby local residents, with the assistance of an NGO, Saahasee, were mobilized to work together and in conjunction with local government bodies to improve environmental conditions and municipal services in their neighbourhoods. As a community-NGO-government initiative, the conceptualization of PLUS dovetailed with the new paradigm of urban governance advocated in India in which government is slated to become more of an enabler vis-à-vis civil society and the private sector, and less of a direct provider for citizens. Nonetheless, the focus of the PLUS Project, namely, the adoption of a community-based approach in low-income settlements, represented an innovation in Delhi at that time, not only because infrastructure provision has long been regarded as the function of governments and implemented in top-down fashion, but also in the sense of the urban poor acting as agents for their own development. Before remarking further on the collective action aspects of PLUS, it is worthwhile to reiterate the fundamental purpose of the initiative, as envisioned by Care India. Thus, the overall goal of PLUS was to demonstrate an approach to urban development that leads to meaningful change in the lives of the poorer segment of the population in Delhi. In support of the main goal, the objectives of PLUS were twofold: to promote community-based solutions to problems of inadequate municipal services and degraded local environments; and to further the inclusion of Delhi's poor into civic structures and decision-making processes. Accordingly, the first objective was practical in nature and shorter-term, while the second was, in essence, transformative and longer-term.

The context of the PLUS Project in Sultanpuri was such that community members did not have an extensive history of collective action, although they had acted together in the past under certain circumstances, mainly for the purpose of protesting against inadequate municipal

services. These efforts, which usually involved petitions and demonstrations, did not, however, result in lasting improvement to their living conditions or relations with government service providers. Also, prior to PLUS, the community did not have much exposure to NGOs, nor experience in working cooperatively with local government bodies. In short, whereas traditional forms of collective action in the community were, by nature, autonomous and reactionary, and tended to be short-lived, the PLUS Project embodied a proactive, ongoing approach to development in partnership with actors beyond the community.

Collective action during PLUS was collaborative in a broad sense, as the community, NGO, and local government each played a role in the various initiatives. Collective action, moreover, had elements of community members acting together (the horizontal dimension) and external actors contributing towards common goals (the vertical dimension). In both the horizontal and vertical dimensions, the NGO functioned as the facilitator of collective action. At the community level, Saahasee held public planning exercises in Sultanpuri to identify the most important problems of local residents and, subsequently, organized CBOs to develop action plans and work towards solutions. Similarly, Saahasee acted as the intermediary between the community and government authorities so as to promote productive working relations and cooperation. The form of collaboration under the PLUS Project was obviously not, though, between full and equal partners, owing to differential capacities, resources and power inherent to the actors. In this vein, although community-based, the process was largely shaped by the NGO. PLUS was community-based in that the needs and aspirations of the community became the basis for the specific initiatives taken up, the related activities took place in the area, and local residents participated to a degree. However, Saahasee effectively controlled key aspects of the collaboration, namely, the overall agenda, strategic approach, institutionalization in the community, funding, and hiring of staff. Thus, while the priorities for collective action derived from the community, the NGO dominated how those priorities were to be achieved.

Under this arrangement, collective efforts did reap a measure of success. The most obvious accomplishment was the new infrastructure in the settlement, especially in the squatter colony where the connection to the municipal water supply and construction of permanent drains represented a significant improvement in living conditions. Elsewhere in the community, composting pits were added and upgrades made to Hazari Park, which were beneficial for the resettlement neighbourhoods as well as the squatters. As far as the PLUS

objective of inculcating community management, though, outcomes were mixed. For instance, regarding the water-distribution system that was implemented in the squatter area following the installation of public standposts, many households there demonstrated a lack of commitment to pay for their water consumption (30-50 % of households abstaining), notwithstanding the community-designed rules in place governing water use. Since the squatters were collectively responsible for the payment to the DJB, the issue might, at some point, risk the continued operation of the system. As well, community management was not able to discourage other types of individualistic behaviour, affecting both the resettlement neighbourhoods and squatter area, such as the dumping of waste in open spaces, the use of parks and drains as open-air toilets, and the practice of covering over drains in front of houses, which made municipal cleaning more difficult. On the other hand, residents showed willingness to cooperate in solid waste management, participating in household source separation and producing compost at the community facility.

Looking at the second objective of PLUS, which was to promote greater inclusion of community members in decision-making structures at the city level, it is fair to say that a few gains were made. During the project, a face-to-face dialogue between the community and government service providers was initiated, where it did not exist before. Government officials were invited to PLUS-organized planning exercises, workshops, and committee meetings held in Sultanpuri, which allowed for sharing of views and problems from both sides and, consequently, improved channels of communication. Through these fora, residents were able to express their needs and advocate for better-quality services. Another aspect of the inclusion process was the imparting of useful information about local government to community members (e.g., responsibilities of different agencies and departments, location of relevant offices, entitlement to decent services). Moreover, several PLUS activities centred on the exercise of citizens' rights, such as Right-to-Information (RTI) requests. While these were all positive developments, the form of interaction between committee members and government officials was, nevertheless, less than optimal for the reason that contact tended to be sporadic, primarily revolving around project planning as opposed to ongoing relationship-building. As well, not all interaction was fruitful from a community perspective, an example being the outright refusal of the RTI request submitted by residents to the MCD Horticulture Department.

Further evidence that collective achievements under PLUS were, all in all, partial, is underscored by findings from the random household survey. One question from the survey asked whether environmental conditions in their settlement had changed or not over the past couple of years (that is, from 2001 to 2003, coinciding with the PLUS initiatives in the community), which can be viewed as a rough barometer of the efficacy of collective action, denoting both the horizontal and vertical dimensions, as a result of PLUS. In this respect, about 33 % of respondents felt that the conditions had improved, 59 % said that it was about the same, and 9 % stated that the situation had become worse. These data suggest, on balance, a small change for the better. Given that the overall goal of PLUS was to implement an approach that resulted in "meaningful improvement" in the lives of the urban poor, the perceptions of residents show, at most, a moderate degree of success.

In terms of overcoming typical problems associated with collective action, the community could only partially do so. Given that the PLUS initiatives were oriented towards community-level benefits, or club goods, the observation from my research was the relative under-investment in collective action, as indicated by the low membership figures of the environmental committees. Thus, the 40-odd individuals who served, at one time or another, on the different committees (seven in all) represented, on a household membership basis, just 3 % of all households in the community (about 1360 households in total). Since all residents of Sultanpuri stood to gain from the various initiatives whether they actually contributed or not, community participation amounted to a classic free-rider problem. Though the PLUS Project attempted to catalyze broad-based interest through community planning exercises and activities, local involvement seemed to have a limited threshold. It was thought that the environmental committees would be able to take the lead in motivating fellow community members and several committees undertook awareness generation activities at the lane level, yet generation of wider momentum proved difficult. The dependence on a relatively small number of individuals who made up the committees exemplified Olson's notion of a privileged group, wherein the larger community (i.e., the privileged group) benefited from the few people who were willing to disproportionately bear the costs.

Although interviews with committee members revealed that individual-level incentives were a factor in their participation (e.g., self-esteem and enhanced status in the community), the prevailing system of selective benefits and social norms did not translate into wider engagement. Aside from community-building efforts and the committees themselves, the

water-distribution system in the squatter colony utilized a rule-based regime although, as noted previously, free-riding around the collective payment was an issue.

11.2 Reflections on Methodology

On the whole, I feel that the data obtained at both the community and city levels were sufficient to construct an in-depth understanding of Sultanpuri, which is the fundamental aim of case study research. I was generally satisfied with the quantitative data collection (from the random household survey) as well as qualitative data gathering (primarily from the purposive surveys of committee members, pradhans, and local stakeholders in the community, as well as key informants in Delhi). Aside from the surveys, the methodology employed direct observation, photography, map-making and a document search in the community, as well as a literature and internet search at the city level. The variety of methods, which is characteristic of the case study approach, provided me with multiples sources of information for each of the research questions and, hence, opportunities to triangulate data in the interpretation and analysis. An unanticipated source of data about the community was the unsolicited comments from residents that were acquired during the random survey. This information, which included personal stories, anecdotes and factual material above and beyond the questionnaire format, enriched the data collection.

In retrospect, it worked out well having two Indian women as my field assistants and translators. They were able to establish a rapport with female community members which was important, especially, in the random survey, considering that two-thirds of respondents were women. Had I utilized male field assistants instead, my sense is that some community members, at least, would not have been as comfortable with inviting us into their homes, nor as likely to open up and share their views and problems. I would add, too, that it was a good decision to be physically present for all of the interviews, both those in the community and at the city level. Regarding the community-level surveys, which were conducted in Hindi, I was able to follow along because my field assistants were adept at translating responses into English for me on the spot, without losing the flow of the interview. Consequently, I could take part in the interview process in terms of recording data, checking responses for internal consistency, and resolving coding matters. Furthermore, as the assistants were also skilled at translating my English into Hindi, I could ask survey participants for clarification or extra information as needed during the course of interviews. In short, my being present at the

interviews was beneficial as far as data consistency and in learning as much as possible about the community.

At the same time, my fieldwork was not without several complications and challenges. For instance, the issue of crime in Sultanpuri impacted on my research, basically slowing the pace at which I could work because, on the advice of my NGO affiliate, I restricted my time in the community to the hours when the PLUS Project staff was present. Had personal safety not been an concern, I could have devoted some evening and weekend time to the random survey, either to obtain a larger sample size than I did (n = 114) or to complete the same sample in less time. A larger sample size would have likely resulted in a better data set and increased potential for statistical analysis, whereas greater productivity would have afforded me more scope for the other types of data collection. The time-consuming nature of the random survey did not affect, for the most part, the three smaller, purposive surveys that I undertook following the random survey. In the environmental committee members survey, I managed to interview all of the 40-odd residents in the community who had been involved with the various committees. Similarly, I interviewed almost the entire group of local leaders. In the survey of local stakeholders, however, the number of respondents was a subset of a larger population and, since the quality of the interviews was uneven, it might have been worthwhile to talk to more respondents.

Regarding my literature search, although I did find useful materials during my fieldwork, not all potential sources were accessible. For example, I managed to obtain only a portion of the PLUS Project documentation through my NGO affiliate, and therefore was somewhat constrained in piecing together the events that had occurred before I commenced my research in the community. The PLUS reports to which I did have access, moreover, emphasized tangible achievements as opposed to critical evaluation of the process itself. Thus, there were gaps in terms of my information about the community and the nature of the NGO intervention. Similarly, in terms of the city-level literature, I was able to obtain publications from several government bodies, yet could not access reports from key departments such as the MCD Slum and JJ Wing, Public Works and the Delhi Jal Board. This lack of information was not, however, a major deficiency as I did have a wealth of primary data from the community and, as far as the government reports, the substantial Indian academic literature and key informant interviews at the city level helped to fill this void.

Contemplating on particular aspects of my research, I would concur with the view put forward by numerous scholars that the idea of social capital is not easy to measure. Social capital presents a challenge because it is multi-faceted rather than a single entity, comprising the tangible and the intangible and existing at different geographic scales. Even though I devoted the major part of my fieldwork to the subject of social capital (particularly the random household survey), the construct has an elusive quality. Since my interest lay in finding out the propensity of the community to act together for environmental management, I utilized the random household survey to assess the horizontal dimensions of social capital or level of integration. Besides questions on socio-economic background and environmental conditions, the survey instrument contained 20-odd questions that probed about the structural and cognitive components of social capital and, given that each component has numerous elements, it meant for a lot of ground to cover. While measurement of some variables, such as associational membership, was fairly straightforward, capturing concepts like networks, trust and social norms was more difficult. It would have been preferable to include multiple questions on the more intricate concepts in order to achieve convergence of data, bearing in mind that the survey instrument cannot be overly long for participants.

To wrap up on methodology, while I intentionally spent most of my fieldwork time in Sultanpuri, in hindsight it would have been useful to have had a longer period for the macro-level research. The considerable travel time required to simply get around Delhi, which is a very spread-out and congested mega-city, was a factor in the number of key informants interviews I carried out and the extent of the literature search I made. I did find that macro-level, academic literature on my research topic was somewhat diffuse and, as mentioned above, government sources were not easily accessible. A longer time investment would be necessary to gain a more complete understanding of the city-level context, given the scale of urban poverty, administrative complexities, and evolving policy scenario.

11.3 The Bigger Picture: Social Capital's Utility in Community Development

The case study of Sultanpuri has a number of implications for community-based approaches to development in urban India and elsewhere, including whether NGOs and other external actors can intentionally promote social capital at the grassroots. Though the PLUS Project was not consciously designed in terms of social capital, the initiative was, nonetheless, implicitly about forging cooperative relations within the community and with wider society to enable collective

action beneficial to the poor. In this sense, Saahasee, as the implementing NGO, attempted to create or induce new forms of social capital in Sultanpuri. In many ways, the particular circumstances of PLUS appeared favourable for NGO intervention: the five-year mandate to promote community-based approaches to environmental management, availability of donor funding for infrastructure and capacity-building in the community; hiring of staff for this specific purpose; and Saahasee's experience working in low-income settlements in Delhi. These factors allowed Saahasee to underwrite, in effect, the start-up costs of collective action. The strategy adopted emphasized building structural forms of social capital, as opposed to addressing cognitive dimensions like trust and social norms. Within the community, the various environmental committees were pivotal for the reason that the CBOs, it was believed, would eventually manage the use of facilities in the settlement with the support of the local government bodies and, thus, become self-sufficient once PLUS was over.

As it happened, Saahasee was, over several years, able to expand the structural basis of social capital in Sultanpuri through establishing the committees, but only to a limited extent. As noted above, a mere 3 % of households in the community, all told, participated on the various committees. Still other data point to some waning of interest and commitment on the part of the community during PLUS. For instance, the total number of committee members declined from the early stages of PLUS (in 2000-01) to the later stages (in 2003-04) and, in the majority of committees, capable leaders from the community had not emerged. Several of the committees, in fact, had become dormant during the latter phase of PLUS or the designated leaders were no longer involved. The overall trend of participation was that the PLUS Project achieved a higher level of participation on the committees in the initial years, during which acquisition of infrastructure was prominent, and a lower level of engagement afterwards when the emphasis changed towards community management and relationship-building with local government bodies. Notwithstanding the positive situation initially, the low committee participation rate suggests that the institutionalization process, on the whole, might not have attained a "critical mass" in the community such that momentum and related activities would be assured in the long run.

As far as generating linkage, PLUS did open avenues for community members to access local government, yet this form of structural social capital was also, in essence, tenuous. Because interaction with government bodies was NGO-initiated, its one-sidedness was an inherent weakness. While the collaboration may have had certain individuals from government

who were sympathetic to the goals of PLUS, relationship-building with a particular community was probably outside of their normal activities and, hence, costly. Besides, Sultanpuri was only one of many low-income communities in the jurisdiction. To give the local authorities their due, they fulfilled various requests from Saahasee for specific inputs, particularly bureaucratic approvals; in other respects, government investment in PLUS was restricted, being oriented towards infrastructure planning as opposed to service delivery. The form of relationship-building, moreover, was ad hoc and informal, which meant that beyond the PLUS framework, there was no official commitment to continue the process. All in all, the contribution of government bodies to PLUS did not, in my view, demonstrate unequivocally a mutuality of interests. Government cooperation, such as it was, could well have been tokenistic, motivated by public relations or the path of least resistance. Given the monolithic nature of agencies like the DJB and MCD, it seems highly unlikely, in hindsight, that an NGO-driven collaboration within a project context over a relatively short term could have led to profound change in community-government relations.

Therefore, it is quite possible that the form of cooperation extended by local government bodies during PLUS approximated one-off compliance, rather than the commencement of ongoing, productive relations. As such, towards the end of PLUS, while better-informed about their rights as citizens than previously, community members did not have any more leverage to press for better-quality municipal services, nor effective means to hold the authorities accountable through sanctions. In this regard, throughout PLUS, Sultanpuri residents repeatedly complained about the irregularity of services in the settlement via the community planning exercises, meetings with government officials, and petitioning from environmental committees. Nonetheless, the establishment of structures themselves did not fundamentally alter the situation, in that community members continued to wait indefinitely for garbage to be collected, drains cleaned, the parks maintained, and so on. Along with a measure of government cooperation in PLUS, systemic abuse was uninterrupted, including the high municipal worker absenteeism rate, bribe-taking, and the refusal of a RTI request from the community by a MCD official. All in all, notwithstanding the goals of PLUS, community members remained relatively powerless to demand change vis-à-vis the government service providers.

While local residents, particularly those in the squatter colony, were cognizant of the infrastructure improvements made during PLUS, sentiment existed in the community, at the

same time, to the effect that collaboration with local government bodies had been a let-down. The conflict between the water-distribution committee and DJB over the monthly amount of the community's collective payment could not be resolved, either by PLUS staff or the committee members. Another disappointment was the parks initiative, as community members felt the MCD Horticulture Department had not kept their part of the bargain to care for plants and otherwise maintain the large park. Given that, in the early stages of PLUS, the idea of working together with government was much-touted and community members had high expectations, the partial results rendered the actual collaboration as something of a "false promise." Accordingly, my research is cautionary regarding the purposive creation of social capital at the community level which, as discussed in Chapter Two, is a matter of debate in the literature. The Sultanpuri case suggests that an approach emphasizing the structural component of social capital at the grassroots, which is not comprehensive of the cognitive dimensions and influence of macro-institutions, can only bring about limited development for the urban poor.

I would add, too, that my research challenges uncritical assumptions frequently made about social capital in the development discourse. Firstly, the case study refutes the notion of free association of individuals within a community or across society which is oftentimes implied, especially in communitarian or neo-Tocquevillean versions of social capital. The spatially localized and largely ascriptive basis of social interaction in Sultanpuri could not have spawned, in other words, the dense intermingling of groups and concomitant vibrant civil society that Putnam believes fostered social capital in northern Italy. Rather, the cellularity that characterized social life in Sultanpuri is, according to the Indian sociological literature, more the norm in the country, notwithstanding the immense social diversity and general view that traditional structures are undergoing gradual erosion. In the PLUS Project, it might have been thought at the outset that the focus on infrastructure and local environment quality, intrinsically of interest to every resident in the settlement, would be sufficient to galvanize broad-based cooperation; however, community members could not act together, at least not in unison, for the basic reason that segmented, as opposed to unbounded, patterns of interaction prevailed.

Secondly, the Sultanpuri case, while not black and white, casts doubts on the assertion made by some social capital proponents that provision of relations with more powerful external actors will necessarily be beneficial for communities. Implicit here is the idea that such relations, whether the augmentation of existing structures or new forms altogether, will

be based on affinity and mutuality of interests which, I would argue, is not preordained. In social capital theory, establishment of vertical relations is usually portrayed as being productive for communities in terms of greater access to resources; in other words, the reason that poor and other marginalized groups require linkage at all is problematized as a lack of useful resources, not an issue of power. The social capital approach in Sultanpuri reveals shortcomings of this conceptualization. Through the PLUS Project, the community was better able to avail itself of the government machinery, including contact with officials, yet the fundamental balance of power did not appreciably change. While their level of infrastructure improved, community members were left with much the same poor-quality services and inferior living conditions as they had before, and remained in a similar subservient position.

On the subject of power, it stands to reason that the more powerful in society, in Delhi as in most places, are probably more interested in the status quo than they are in change. If that is so, it seems facile that, simply through enlarging relations between communities and more powerful actors, cooperation which is advantageous for the poor would be expected to ensue. It seems more realistic to think that the more powerful groups might dispense resources, without forfeiting real power, along the lines of what occurred in Sultanpuri.

Thirdly, while not always explicit, the notion conveyed in the dominant discourse around vertical relations with external actors is predicated on a consensual approach to development. PLUS fit in this mould, working within the parameters of the bureaucracy to achieve incremental improvements. Though the consensual approach in this case was not a total failure or success, it does raise questions about whether the strategy was optimal, if only because the process is contingent on there being windows of opportunities in the macro-environment. Opportunities for collaboration, in other contexts, might be limited or non-existent. The potential downside of bias towards consensus in social capital theory is obscurement of the possibility of other approaches, including confrontation, which might otherwise accomplish more profound change.

Fourthly, the case study illustrates that social capital, alone, does not tell the entire story about the prospects for collective action in a given community or society, contrary to the more optimistic accounts of the concept. While the particular configuration of social life in the community shaped the capacity for collective action, human capital was a significant factor as well. In some respects, human capital in Sultanpuri was an asset; for example, the random survey findings showed that over half of respondents felt that they had rights and the power to

make changes in their lives. In other ways, though, such as formal education, economic security, and health concerns, the stock of human capital resembled a constraint. To elaborate, the level of educational attainment in the community was low overall, with over 60 % of respondents in the random survey having no formal schooling. On average, male survey participants had close to six years of education, whereas females had completed less than three years. Thus, the majority of community members were illiterate, which was an impediment not only in terms of individual life opportunities, but also collective action. On several environmental committees, for instance, all members were illiterate and, consequently, they could not record meeting minutes, file petitions, or write correspondence to government officials. On the water committee, the lack of literacy and numeracy amongst members, as well as in the community at large, unfortunately led to conflicts and mistrust over household water bills. Educational barriers, in effect, reduced the scope of collective action in the community and relations with local government bodies.

Aside from formal education, the economic situation of many households in Sultanpuri was a limitation for collective action. The insecure position of a lot of residents, such as the daily labourers, vendors and workers in home-based enterprises, was not conducive to community participation. Committee work, which could involve long meetings and travel outside the community, would not have been feasible for some. In the case of other residents, major health issues in the community, including TB, HIV/Aids, alcoholism and drug abuse, would have precluded their involvement in community activities. In addition, personal confidence, a form of human capital, was something that several community members mentioned as lacking, especially in interaction with government officials where, oftentimes, caste- and class-based differences existed. For various reasons related to human capital, the formal aspects of relations with government bodies under the PLUS Project were carried out by staff and not community members. In the larger scheme, since human capital is, ultimately, the foundation for social capital, my research suggests that development approaches which concentrate solely on the latter capital will, most likely, only go so far without comparable efforts in human capital.

Finally, the Sultanpuri case underscores the importance of macro-level institutions in the generation of social capital in the sense that the collaboration under PLUS would probably have been more successful had the capacity and commitment of government actors been greater. As such, the research affirms the integrated model of social capital of Woolcock,

whereby the macro-level factors of institutional integrity and synergy shape and, in turn, are shaped by, community-level forms of social capital. Lastly, my findings, which reveal shortcomings inherent in a project orientation to creating social capital, point to the need for broad policy- and program-based approaches to engender systemic change.

Appendix A: Notes on Theory

This appendix contains further elaboration of theoretical perspectives on civil society that could not be included in the main body of the dissertation.

Civil Society

The broader, more neutral interpretation of civil society, which I utilize, differs from the more specific, communitarian notion of "civic community" of Putnam and other neo-Tocquevilleans, also referred to as the associational school in the literature. The notion of civic community is essentially a normative concept, bound up in the values of community mindedness, citizen engagement in the public sphere, and participatory democracy (Ehrenberg, 1999; Foley and Edwards, 1998a; Hyden, 1997). Inspired by de Tocqueville's treatise about small-town life in nineteenth century New England, the civic community is implicitly premised on an ideal of social organization whose hallmarks are egalitarian social structures, a culture of pervasive trust and cooperation, and free association between equals (Ehrenberg, 1999; Hann, 1996). The civic community is also understood as embodying the quality of civility, implying tolerance towards other groups and willingness to compromise and negotiate (Norton, 1995). Non-political associations (e.g., Putnams's choral societies and soccer clubs) and more political organizations make up the civic community; in both cases the common denominator is the broadening of individual identities, formation of habits of cooperation and notions of shared responsibility, and development of democratic values.

Indeed, for some theorists, associations must be structured internally along democratic lines, a conceptualization of civil society sometimes referred to in the literature as "classical" or "purist." At the same time the civic community, in its emphasis on formal organization, cross-cutting or secondary ties, and face-to-face contact in local settings, represents a restricted set of associational forms relative to the potentially wide civil society spectrum; ostensibly outside the civic realm, for instance, are primary groups, informally based activity, and larger-scale social movements (Ehrenberg, 1999).

For the most part, the civil society literature, especially the civic community model or associational school, emphasizes the positive impacts of associational life on wider society. In this vein, five main functions are attributed to civil society. The first and most important is the neo-Tocquevillean claim regarding civil society's socialization role, wherein participation

in associations is believed to instill democratic values, principles of citizenship, and commitment toward public causes – what Putnam calls "civic engagement" (Foley and Edwards, 1998a; Diamond, 1994). The second function is educative, in that associations are fora for dissemination of information and ideas, as well as development of citizenship skills (Hyden, 1997; Diamond, 1994). The third role is representative, in the sense of civil society affording identity and voice to various communities and groups within society and thereby contributing to public debate (Foley and Edwards, 1998a; Swift, 1999). The expression of interests and values of relatively autonomous associations within civil society provides the basis for its fourth function, which is a counterbalance to state power (Elliot, 2003). As such, civil society may monitor performance, express discontent, pressure for action, and, if need be, sanction the state (Elliot, 2003; Hyden, 1997; Diamond, 1994). The fifth and final role that civil society plays is as a provider of public or quasi-public services (Foley and Edwards, 1998a).

Social capital and civil society are certainly intertwined notions, yet distinguishable in several respects. According to the theoretical framework I am using, though the two terms have considerable structural overlap, the domain of social capital is larger; in the integrated view of social capital discussed previously, social capital is a property not only of associations lying between family and state, but also of family and state. Furthermore, I have defined social capital as a source of, or capacity for, cooperative behaviour and collective action, as opposed to an outcome, which is the collective action itself in whatever form. Civil society, by way of comparison, is treated in the literature more as an outcome: collective action is a given and the main focus is the nature of the collective action (e.g., Fox, 1996; Robinson, 2003). As such, in most discussions of civil society, the cognitive elements of social capital (norms and trust) are usually not explicit or of main concern (with notable exceptions, like Putnam).

Still other qualitative differences are apparent in scholarly approaches to social capital and civil society. The communitarian or neo-Tocquevillean approach to social capital tends to assess the "health" or robustness of civil society in terms of its associational density (i.e., the number of associations or membership levels); from this perspective, associational purpose or activities is secondary or peripheral (Foley and Edwards, 1996; Ehrenberg, 1999). Much of the civil society literature, on the other hand, eschews the notion of density, focusing rather on the content or substance of associational life (e.g., interests, values, ideology, internal dynamics, practices, and concomitant effects). Furthermore, it could be argued that the civil society

discourse is concerned with a wider range of associational life (e.g., social movements) than is apparent overall in the social capital literature, especially the neo-Tocquevillean accounts. In addition, many discussions of civil society emphasize the salience of the political and economic context in the development and character of associational life (e.g., White, 1994; Ehrenberg, 1999; Foley and Edwards, 1996; Foley and Edwards, 1998b; Tarrow, 1996; Elliot, 2003). In comparison, structural inequalities and the power dimension are often not addressed in the social capital literature.

Having discussed civil society in terms of its definitional aspects, roles, and several qualitative differences in its usage relative to social capital, I will now mention how I utilize the notion of civil society in the empirical part of the thesis. First of all, I employ civil society in a generic way to categorize the array of groups and associations in the study community that represent the intermediate realm between the family, state and market – informal and organized, ascriptive and elective, non-political and political. Further, notwithstanding my broad, non-normative interpretation of civil society, I also make reference to the narrower, normative communitarian and purist formulations. Secondly, consistent with the onus in the civil society literature, my research looks "inside" the constituent associations of civil society in the study community, rather than making *a priori* assumptions about its virtues. In this regard, I am particularly interested in the activities of the CBOs set up in Sultanpuri for the purpose of community environmental management, as well as other local structures that shape social capital. Thirdly, as advocated by many civil society theorists, I consider to some extent the underlying context (e.g., social inequalities, the character of the state) in order to better grasp what civil society is in the context of the study community. Fourthly and finally, I make use of the broad interpretation of civil society later in the thesis in relation to my research question concerning governance.

Appendix B: Notes on the Indian Context

This appendix provides additional discussion of urbanization trends, the caste system, empirical social capital research, and background information on Delhi, which could not be included in the main body of the dissertation.

Urbanization Trends in India

The population of India reached 1.027 billion in 2001, which was the year of the most recent decennial national census (Census of India, 2001). Of the total population in 2001, 285.3 million (27.8 %) were living in urban centres and 741.6 million (72.2 %) in rural areas (Census of India, 2001). While still predominantly rural, the country is becoming increasingly urbanized.[1] The proportion of urban dwellers in the country has climbed steadily from 17 % in 1951 to almost 28 % in 2001, as shown in Table 1 below. It could be argued that, on the basis of urban population decadal growth rates, the pace of urbanization in India has slowed during

Table 1. Urban Population Growth in India, 1951-2001

Census year	Total pop'n (millions)	Urban pop'n (millions)	% Urban pop'n	Decadal urban increase (millions)	% Decadal growth in urban pop'n
1951	361	62	17.1	18	41.2
1961	439	79	18.0	17	25.4
1971	548	109	19.9	30	38.0
1981	685	160	23.3	51	46.8
1991	844	217	25.7	57	35.6
2001	1027	285	27.8	68	31.2

Sources: Census of India, 2001; Planning Commission, 2002; Jacquemin, 1999

the 1990s. Thus, for the period 1991-2001, urban decadal growth was 31.2 %, representing a decline from 35.6 % in 1981-1991 and 46.8 % in 1971-1981. In absolute terms, though, decadal urban growth has continued to rise, with 68 million urban dwellers added to the population from 1991 to 2001.

Compared to the global urbanization level of 47 % (UN-Habitat, 2005), the Indian figure of 27.8 % is on the low side. India's urban percentage also falls below the Asian

[1] In India, an urban settlement is defined as having a population of more than 5,000, a population density over 400 per hectare (1000/sq. mile), and at least 75 % of its male labour-force engaged in non-agricultural activities. In addition, the census authorities have the power to classify places as urban that have urban characteristics but do not meet the aforementioned criteria (Jacquemin, 1999).

average of 37.1 % for the year 2000[2] (UN Population Division, 2005). India's urbanization level is below other Asian countries like China (35.8%) and Indonesia (42.0 %), but higher than neighbouring Bangladesh (23.2 %) and Nepal (13.7 %) (all data for 2000) (UN Population Division, 2005). India is less urbanized than Africa, which matched the Asian average of 37.1 % urban in 2000 (UN Population Division, 2005). The pace of urban growth in India, at 2.7 % annually during the 1990s (Oxford Policy Management, 2004), is also well below the explosive African rate of 4.9 % (UN-Habitat, 2005). Nevertheless, India's urban growth rate of 2.7 % would have to be considered high as this percentage represents a doubling of urban population in only 26 years (Haupt and Kane, 2004).

Although the extent of urbanization in India is at present relatively low, the number of people living in urban areas is substantial – the 285 million Indian urban dwellers exceed the total population of any country in the world, excepting China and the United States (PRB, 2004). For the foreseeable future, India is expected to continue on an urbanization path, which may accelerate at some point as a result of government liberalization policies, major economic growth and increasing modernization of agriculture (Jacquemin, 1999). The UN Population Division (2005) forecasts that, by 2030, India's total population will swell to 1.4 billion, of which 586 million people or 41.4% of the total population, will live in urban areas. Accordingly, in the not-too-distant future, India's already-huge urban population will more than double, requiring a massive effort to provide housing, jobs, infrastructure and services and, at the same time, ensure the quality of the urban environment.

In India today, urbanization levels vary considerably across the country, which is made up of 26 States and 9 Union Territories. Several of the smaller union territories are heavily urbanized, most notably Delhi (93.0 %), Chandigarh (89.8 %) and Pondicherry (66.6 %) (Census of India, 2001). Among the states, the most urbanized are Goa (49.8 %), Mizoram (49.5 %), Tamil Nadu (43.9 %), Maharashtra (42.4 %) and Gujarat (37.4 %) (Census of India, 2001). The least urbanized states are Himachal Pradesh (9.8 %), Bihar (10.5 %) and Sikkim (11.1 %), Assam (12.7 %) and Orissa (15.0 %) (Census of India, 2001). In the overall geographic pattern, southern and western India are moderately urbanized, whereas northern and eastern India are less urbanized (Jacquemin, 1999). Generally, the economically stronger

[2] Though more recent estimates are available for regional and national urbanization levels, UN Population Division figures for 2000 have been used for comparison purposes with the 2001 Indian census. As the UN Population Division provides data for every fifth year (i.e., 2000, 2005 and 2010), the year 2000 represents the closest comparison.

states have higher levels of urbanization (e.g., Maharashtra, Tamil Nadu and Gujarat), while the economically weaker states are less urbanized (e.g., Bihar, Orissa and Assam) (Jacquemin, 1999). State-level urbanization levels are positively related to indicators such as per capita income, share of income in secondary and tertiary sectors, and economic growth rate (Krishan and Singh, 1996). Indian cities are considered to be vital engines of economic growth, contributing 50-60 % of the country's Gross Domestic Product (Suresh, 2001).

Another significant aspect of Indian urban development is increasing concentration in large cities. In 2001, 35 cities/urban agglomerations (UAs) had a population in excess of one million, up from 23 in 1991 and only 5 in 1951 (Planning Commission, 2002; Suresh, 2001). By 2021, the number of million-plus cities may go up to 70 (Venkateswarlu, 1998). The current 35 million-plus cities/UAs represented 37.8 % of the total urban inhabitants in the country in 2001, as compared to 19 % of the total urban population for the five million-plus cities in 1951 (Suresh, 2001).

Three of the 35 million-plus urban centres are mega-cities having populations of more than 10 million – Greater Mumbai (formerly Bombay) (16.4 million), Kolkata (formerly Calcutta) (13.2 million), and Delhi (12.8 million) (Census of India, 2001). Mumbai, Kolkata and Delhi are among the world's most populous urban agglomerations, ranking 3rd, 9th and 14th, respectively (Dutt and Pomeroy, 2003). Another three UAs have populations over 5 million – Chennai (formerly Madras) (6.4 million), Bangalore (5.7 million), and Hyderabad (5.5 million) (Census of India 2001). In different parts of the country, urban areas are increasingly coalescing into geographically contiguous areas, such as the Delhi-Faridabad corridor and the Mumbai-Ahmedabad corridor (Suresh, 2001).

Growth in India's urban population has been due to three factors: natural increase, net rural-to-urban migration, and reclassification of places as urban settlements (Venkateswarlu, 1998). During each census decade between 1961-91, natural increase contributed the largest share of urban growth, followed by net migration and then reclassification (Venkateswarlu, 1998). Urban growth for the period 1981-91, for instance, was attributable to 60 % natural increase, 22.6 % net migration, and 17.4 % reclassification (Venkateswarlu, 1998). Between 1971-1981, however, net migration accounted for 38.4% of urban growth, almost as much as the natural increase of 41.8 % over that period (Venkateswarlu, 1998). Though comparable figures are not available for the most recent census decade of 1991-2001, Indian scholars believe that rural-to-urban migration declined during the 1990s (Venkateswarlu, 1998; Kundu,

n.d.). Even with a drop in rural-to-urban migration, though, the rate of natural increase in urban areas has remained fairly constant over the last several decades at around 2.0 % (Venkateswarlu, 1998), thereby sustaining the exponential growth in urban population.

Rural poverty is usually considered the main push factor and job opportunities the most important pull factor in Indian rural-to-urban migration (Venkateswarlu, 1998). Other factors include better infrastructure and services in urban centres (e.g., education, health facilities, water and sanitation), the desire to escape from cultural and socio-economic caste barriers in the villages, environmental calamities, and the lure of city life (Venkateswarlu, 1998). In terms of per capita income and other indicators, inter-state disparity has been increasing since the mid-1960s, and rural-urban differentials have also become more pronounced (Kundu, n.d.). These spatial inequalities would be expected to drive high levels of out-migration from the more impoverished states to the economically stronger states, yet migration has decelerated (Kundu, n.d.). The slowdown in rural-to-urban migration during the 1990s is attributed to declining job opportunities in cities as a result of low rates of growth of formal employment, high unemployment rates, and inadequate investment in urban infrastructure that has restricted economic development (Venkateswarlu, 1998).

Urban Poverty: Official Headcounts and Broader Conceptualizations:

According to Government of India estimates, the incidence of urban poverty in the country has decreased markedly over the last several decades (Planning Commission, 2002). As shown in Table 2 below, the proportion of the urban poor declined from 49.0 % in 1973-74 to 23.6 % in 1999-2000. The level of rural poverty also fell significantly from 56.4 % to 27.1 % over the same in the 1990s (less than 5%), however, was smaller than the differential that existed in the

Table 2. Poverty Levels in India, 1973-2000

Year	Poverty Ratio (%)			No. of poor (millions)		
	Rural	Urban	Combined	Rural	Urban	Combined
1973-74	56.4	49.0	54.9	261.3	60.0	321.3
1977-78	53.1	45.2	51.3	264.3	64.6	328.9
1983	45.7	40.8	44.5	252.0	70.9	322.9
1987-88	39.1	38.2	38.9	231.9	75.2	307.1
1993-94	37.3	32.4	36.0	244.0	76.3	320.3
1999-2000	27.1	23.6	26.1	193.2	67.1	260.3

Source: Planning Commission, 2002

1970s (over 7 %). The total number of urban poor increased from 60 million in 1973-74 to 76.3 million in 1993-94 and then declined to 67.1 million in 1999-2000 – the first time that the figure had decreased (Planning Commission, 2002).

Although the rural poverty level is higher than the urban poverty level at the national scale, in many states the percentage of urban poor exceeds that of the rural poor (e.g., Andhra Pradesh, Goa, Gujarat, Haryana, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Rajasthan, Tamil Nadu, Delhi and Pondicherry) (Planning Commission, 2002). It is only a smaller number of the more populous states that conform to the national trend (e.g., Bihar, Orissa, Uttar Pradesh, West Bengal, Himachal Pradesh) (Planning Commission, 2002). Generally, smaller urban centres in India have a higher incidence of poverty than large cities, comparable to that in rural areas (Kundu and Mahadevia, 2002). Poverty tends to be more prevalent in smaller urban areas because of weak economic bases and limited employment opportunities in the formal sector (Planning Commission, 2002).

The accuracy of government poverty figures in Table 2 can be criticized on several grounds, however. Poverty headcounts in India are based on the income equivalent of a minimum food basket consisting primarily of foodgrains. Since 1962, India has used separate poverty lines for urban and rural areas, which are based on nutritional standards of 2100 calories and 2400 calories, respectively (Pathak, 1999). One limitation to the government poverty data is that national income thresholds (rural and urban) ignore cost variation from place to place. This is borne out by unofficial Indian estimates, using the same caloric norms but state-specific cost of living indices for urban and rural areas, which suggest higher levels of poverty (Pathak, 1999). The poverty line in India is also somewhat arbitrary because food items are frequently subsidized and the level of subsidies varies over time (Kundu and Mahadevia, 2002). The uniform food basket, moreover, does not account for cultural differences in diet. In addition, because data are usually analyzed at the household level, the approach can mask intra-household inequalities that may relate to gender, age or social status (Moser, 1998).

Although poverty headcounts are useful in that they provide a standardized scale to compare the incidence of poverty of a population over time or across sub-populations, the method itself cannot capture the phenomenon of poverty because only a single criterion is utilized (Satterthwaite, 1997; Kundu and Mahadevia, 2002; Moser, 1998; UN-Habitat, 2003). The conventional economic approach does not take into account basic necessities such as

housing, water supply and sanitation (Heggade, 1998; Kundu and Mahadevia, 2002). Among many academics and development practitioners, poverty is increasingly viewed as a multi-dimensional and dynamic process that includes various elements of deprivation in well-being or quality of life (e.g., UN-Habitat, 2003; Wratten, 1995; Moser, 1998; Beall, 1997; Kundu and Mahadevia, 2002). This broader conceptualization of poverty is emphasized by Moser (1998), who contends that identification of types of vulnerability[3] is essential in order to more fully understand the processes by which poor people become or remain poor. Vulnerability is not synonymous with poverty, since individuals, households and communities can be above the poverty line yet remain susceptible or defenseless to economic and other forms of deprivation (Moser, 1998).

While the Indian Government has not dispensed with poverty headcounts, the official thinking has evolved in the 10th Five Year Plan (2002-2007) to include the following categories of vulnerability of the poor:

- *Housing and infrastructure vulnerability*: Lack of tenure, poor quality shelter without ownership rights, no access to individual water connection/toilets, unhealthy and unsanitary living conditions
- *Economic vulnerability*: Irregular/casual employment, low paid work, lack of access to credit on reasonable terms, lack of access to formal safety net programs, low ownership of productive assets, poor net worth, legal constraints to self-employment
- *Social vulnerability*: Low caste status, minority group status, low social capital, exclusion from local institutions and governance structures, lack of access to social justice
- *Personal vulnerability*: Lack of education and skills, lack of information, inadequate access to food security programs and health services, susceptibility to discrimination, violence and intimidation (adapted from Planning Commission, 2002)

[3] Moser (1998; 3) defines vulnerability as "insecurity and sensitivity in the well-being of individuals, households and communities in the face of a changing environment, and implicit in this, their responsiveness and resilience to risks that they face during such negative changes." "Environment," in Moser's usage, includes ecological, economic, social, political and other factors that can potentially threaten well-being. For Wratten (1995; 17), vulnerability is a state of "defenselessness, insecurity, and exposure to risk, shocks and stress."

The above list is applicable to both urban and rural contexts; however, several features of Indian towns and cities tend to produce a different set of vulnerabilities experienced by the urban poor as compared to their rural counterparts (which is not to imply, though, that urban dwellers are worse off than villagers). The extremely commoditized nature of urban life, for instance, means that living costs are usually higher than in the countryside (Moser, 1998; Wratten, 1995). In general, the urban poor are more dependent on cash incomes to obtain access to shelter, food, fuel, water, sanitation, child care and other necessities, which are often free or less costly in many rural areas (Venkateswarlu, 1998). Housing costs, especially, can be much higher in urban settlements (Planning Commission, 2002; Wratten, 1995). For urban dwellers, access to housing, even when it is illegal or insecure, is crucial not only in ensuring physical sustenance but, frequently, as a productive asset (e.g., renting rooms or having space available for income-generating activities) (Wratten, 1995). Urban households also require money to purchase goods and services that may not be obtainable in rural areas but are normally consumed in the city (e.g., electricity, transportation, education and health care (Wratten, 1995; Moser, 1998).

In such a commercialized milieu, the urban poor face a number of constraints and risks related to their labour, including lack of formal education and skills, changes in labour demand, low earnings and lack of job security (Wratten, 1995). They face a tight job market in Indian cities, where the unemployment rate is higher than in rural areas and the workforce is becoming increasingly casualized (Planning Commission, 2002; Pathak, 1999). The poor are also exposed to a range of health risks that are directly linked to the substandard conditions in which they live in towns and cities. Poor urban communities typically have low-quality housing, inadequate services and overcrowding and frequently bear the brunt of pollution from industries, vehicles and other sources in the vicinity (Moser, 1998). These circumstances create numerous environmental hazards that are not only detrimental to well-being, but also affect the productivity of the urban poor (Wratten, 1995).

In addition the urban poor, particularly recent rural-to-urban migrants, may find themselves in unfamiliar social surroundings, as cities are commonly "melting pots" of citizens from diverse geographic, cultural, ethnic, linguistic and religious backgrounds (Wratten, 1995). In the urban setting, lifestyles, interpersonal relationships and neighbourhood social networks may be different from what people were accustomed to (Wratten, 1995). The greater social and economic heterogeneity in urban centres may be detrimental to inter-

household and community mechanisms of trust and cooperation (Moser, 1998). The urban poor, moreover, may be susceptible to other harmful social forces, such as discrimination or hostility from other groups, exclusion from decision-making structures at the city level, and crime and violence (Wratten, 1995). Finally, relative to rural inhabitants, the urban poor are likely to have more contact with the state and the police in their daily lives. That interaction is often a negative experience (e.g., corrupt police officers, unresponsive public servants, exploitative politicians) as well as another form of vulnerability (Wratten, 1995).

In my view the Indian poverty line, which divides the population into poor and non-poor based on nutritional norms, is somewhat misleading and under-represents the extent of urban poverty, primarily because essentials like housing and services are not taken into account. The urban poverty line in India is probably set too low in the first place relative to actual living costs in towns and cities. Another shortcoming is that the poverty line ignores various forms of vulnerability that have a bearing on quality of life.

Going beyond traditional economic thinking, Satterthwaite defines poverty in a more comprehensive way as "human needs that are not met" (1997; 9), which does not necessarily mean being below the poverty line. Satterthwaite's definition, moreover, allows for greater conceptual flexibility, such as differentiating among the population in terms of absolute and relative poverty. The absolute poor are those who fall below the government poverty line, that is, almost one-quarter of the Indian urban population, according to the 2001 census. Unable to obtain the minimum food intake and generally lacking in assets, the absolute poor are vulnerable in many of the ways noted above. The relative poor, on the other hand, have incomes above the poverty line, yet are not assured either of obtaining food and other necessities. While the relative poor would tend to have more resources to draw upon and face less severe forms of deprivation than the absolute poor, their well-being is at risk in many of the same respects.

Low-Income Urban Settlements:

The majority of India's urban poor lives in slums, squatter colonies and other substandard settlements in towns and cities throughout the country (Heggade, 1998; Chakraborty, 1995). Residents of these communities are predominantly from the lower economic strata, but a significant proportion has incomes above the poverty line (Mitra, 2003). The main reason that non-poor people live in low-income areas is because of the shortage of affordable housing and

serviced land in urban India, particularly in the large cities (Planning Commission, 2002; Heggade, 1998; Chakraborty, 1995). At the same time, not all of the urban poor reside in low-income communities. Generally, a segment of the poor population in Indian cities is dispersed throughout the urban space – in the city centre, in commercial and industrial zones, in more affluent residential areas, around construction sites and in marginal locales (Heggade, 1998). In middle- and high-income neighbourhoods, the poor live in servants' quarters, on pavements or vacant land, and in other places so that they can participate in the local service economy (Heggade, 1998). The poor also inhabit peripheral areas, within and beyond the city limits. As a result of intense housing pressures in India's larger cities, especially, migrants are increasingly settling in the rural outskirts rather than in the city proper, thereby constituting a floating population that commutes daily to the core for employment opportunities (Kundu, n.d.).

The terminology for low-income urban settlements in India is diverse and includes names in English, Hindi and regional languages reflecting different structural types, legal status and cultural variation. In terms of form, most low-income settlements are either hutment types or tenement types. Squatter settlements, known as *jhuggi-jhonpris* in Delhi, *bustees* in Kolkata, *zopadpattis* in Mumbai, and *cheris* in Chennai, consist of small hutments constructed in a dense layout on illegally appropriated land (Sharma, 2002; Mitra, 2003; Sivam, 2003). Often located close to workplaces, the sites themselves may be marginal or unsafe. Houses are usually *kutcha* (non-permanent) structures made with assorted materials such as mud, wood planks, tarpaulins, tin sheets and bricks (Venkateswarlu, 1998; Mitra, 2003). Services such as water, sanitation, garbage collection, storm drainage and street lighting are completely lacking or basic (Sharma, 2002).

The tenement category includes various structures, many of which would have been authorized and built according to prevailing standards at the time of construction, but have since become run-down (Mitra, 2003). *Katra* is a term used to describe one- or two-storey tenements built in rows within a compound, having narrow internal courtyards, and accessible by a single gate or entrance from the street. Older katras are extremely congested, poorly ventilated and lacking in basic services (Agnihotri, 1994; Mitra, 2003). Other types of tenement slums include *chawls*, a word used widely throughout urban India, refers to permanent, multi-storey buildings consisting of one-room units flanking a central corridor on each floor (typically three to six storeys high) (Agnihotri, 1994; Mitra, 2003). Typically,

chawls are extremely overcrowded although most have some level of municipal services (Agnihotri, 1994; Sharma, 2002). A variation of chawls is *patra chawls*, which are semi-permanent, single-storey residential structures constructed with iron sheets (Agnihotri, 1994).

The most commonly used English term for poor or substandard urban settlements in India is "slum," although the meaning varies from study to study. "Slum" is generally used in one of two ways: 1) as a broad term for various types of substandard settlements, including squatter settlements and dilapidated tenements, or 2) as a legal term for a specific class of settlement. In the latter usage, the Government of India has defined slums in the *Slum Areas (Improvement and Clearance) Act*, 1956, as "areas where buildings (a) are in any respect unfit for human habitation; or (b) are by reason of dilapidation, overcrowding, faulty arrangements of streets, lack of ventilation, light or sanitation facilities, or any combination of these factors are detrimental to safety, health or morale" (Mitra, 2003; 28-29). The official definition, therefore, is a combination of physical criteria related to housing conditions and community infrastructure, as well as more subjective social criteria (i.e., the phrases "unfit for human habitation" and "detrimental to safety, health or morale"). Settlements designated under the *Slum Areas Act* are known as "notified slums" or legal slums, which generally confers entitlement to civic amenities and services.

National Census Data on Slums:

Although data on slums have been collected in the last few Indian censuses, temporal and spatial trends are not clear due to data gaps and methodological inconsistencies. As of the 2001 census, 40.6 million persons or 14.2 % of the total urban population of 285 million, lived in slums (Census of India, 2001). However, the 40.6 million is only a partial figure, since many towns and cities reported having no slums; the 40.6 million represents urban centres with a combined population of 178 million that reported having slums, while other urban settlements with a collective population of 107 million reported having no slums (Census of India, 2001). The non-presence of slums in many urban centres, accounting for more than a third of the total urban population, is probably due to under-reporting. Nine states/union territories in the country, in fact, reported no urban slums in the 2001 census, which would seem to be unlikely.

A problem with the Indian census data is that some states have adopted the slum definition from the *Slum Areas Act* and others use different definitions (Planning Commission,

2002). Even among states that do use the Act's definition, its qualitative dimensions would give rise to different interpretations. Another deficiency with the official data relates to the non-listing of many slum settlements in local government departments (Planning Commission, 2002). Census data tend to reflect more stable slum communities that are recognized by local authorities and overlook, for example, shorter-duration settlements (Mitra, 2003). The government data, furthermore, are not comprehensive because the census only counts slums of a minimum size, which is 300 people or 60 households (UN-Habitat, 2003). In addition, slum settlements in towns with populations less than 50,000 are not included in census figures (Chakraborty, 1995; Planning Commission, 2002). For all these reasons, the government figures underestimate the prevalence of slums in the country.

Several spatial patterns, however, are apparent from the 2001 census data regarding slum incidence in the major cities. Of the city-level data released so far,[4] slum population data are available for municipal corporations with over one million people, but not for smaller urban centres or the larger urban agglomerations (UA's). Among the million-plus municipal corporations (26 in total), the average proportion of slumdwellers is 23.4 % (Census of India, 2001). Greater Mumbai, with 5.8 million slumdwellers or 48.9 % of the total population of 11.9 million, has the largest number of slum inhabitants in absolute and relative terms (Census of India 2001). Delhi Municipal Corporation, with a slum population of 1.8 million, has the second-largest number of slumdwellers, yet they represent a much smaller 18.9 % of the population base of 9.8 million people (Census of India 2001). Kolkata, with 1.5 million slum citizens, has the third-largest slum population, accounting for 32.5 % of the 4.6 million urban dwellers (Census of India 2001). The other 20-odd municipal corporations have slum levels from 0.25 % to 46.6 % (Census of India 2001), a large range that likely reflects reporting discrepancies. Based on data from the early 1990s, it has been argued that the million-plus cities have a disproportionate number of slumdwellers compared to smaller urban centres in the country (Sharma, 2002); however, insufficient data availability from the 2001 census precludes corroboration of the trend.

UN-Habitat, utilizing a different slum definition than the Indian government, estimates that slum dwellers represent a much larger 55 % of the urban population in India (using 2001 data) (UN-Habitat, 2003b). The UN-Habitat definition, which was recommended for

[4] At the time of writing, most of the 2001 census data released on urban slums is at the state/union territory level, with limited data available at the city level.

international usage in 2002, is based on five characteristics: access to water; access to sanitation; location and structural quality of housing; overcrowding; and security of tenure (UN-Habitat, 2004). These indicators are restricted, therefore, to the physical and legal characteristics of the settlement, leaving out the social aspects. Each characteristic is operationalized for enumeration purposes[5] (UN-Habitat, 2003). In calculating the incidence of slum dwellers for India and other countries, UN-Habitat used the four physical characteristics and left out tenure on account of incomplete data. A household lacking any one of the four physical characteristics was classified as a slum dwelling (UN-Habitat, 2004). Had tenure been considered in the slum estimation, the proportion of slum dwellers in India would have been even higher. The UN-Habitat data, I would argue, provides a more accurate picture of urban India than does the Indian government estimates, since the latter has a number of methodological shortcomings.

The Indian Caste System

The Scheduled Castes (SCs), also known as Untouchables, Harijans (People of God) or Dalits, along with the Scheduled Tribes (STs), fall outside the four principle *varnas* (broad caste categories) of the Hindu caste system and thus occupy the lowest position in the Indian social hierarchy. The name "Scheduled Caste" originated with a list of socially and economically disadvantaged castes identified by the British Government in 1936, but became more widely utilized following Independence (Mendelsohn and Vicziany, 1998). Scheduled Caste has since become a legal term, enshrined in the Indian Constitution and various acts, that qualifies members for special entitlements intended to redress historical patterns of oppression and to promote equality in Indian society. Such benefits for Scheduled Castes include quotas and reservations to increase representation of the SC population in the political system, in government employment and in university admissions (Human Rights Watch, 1999; Mendelsohn and Vicziany, 1998). As designation of Scheduled Castes varies from state to state, I use the SC list prepared by the Delhi Government to categorize survey respondents in Sultanpuri.

Other Backward Castes (OBCs) is the official term for castes belonging to the Shudras (labourers and artisans), the class at the bottom of the varna system. Since these castes are

[5] The various characteristics have a standard or threshold, which reduces the element of subjectivity in assessment. For example, the standard for overcrowding is more than two persons per room or less than 5 sq. metres per person (UN-Habitat, 2003).

included within the varna scheme, the OBCs are higher on the social scale than the SCs but nonetheless rank below castes associated with the higher varnas (Human Rights Watch, 1999). Like the SCs, the OBCs have been traditionally disadvantaged and are now given preferential treatment through the reservation system. The OBC lists are also state-specific and I have based my classification of the study community on the Delhi OBC list.

The General Castes, sometimes called forward or upper castes, are those castes associated with the three highest varnas, which are, in order of increasing ritual status, the Vaisyas (merchants and traders), the Ksyatriyas (rulers and soldiers) and the Brahmins (priests and teachers). The four varnas, of course, are an oversimplification of the Hindu caste system, which is an extremely complex arrangement of thousands of castes and sub-castes, differentiated along the lines of traditional occupation, region, language or dialect, religious beliefs and cultural practices. The caste system in India, moreover, extends to many non-Hindu communities, including Muslims, Sikhs, Christians, Jains and Jews (Srinivas, 1962).

Social Capital Research in India

Village-based studies:

The empirical research includes three case studies from the edited book *Interrogating Social Capital*, all of which are based on fieldwork conducted in the late 1990s in village settings across different parts of India. These studies have a common theme in the functioning of village-level institutions, both traditional and modern, the latter referring to the state-initiated introduction of formal structures of local government (*panchayati raj*) that occurred a few years previously (in the mid-1990s). All of the authors make the assumption that the form or quality of collective action attained through the local institutions is an indicator of inherent social capital (as opposed to social capital itself), which is in accord with my own conceptual distinction between the sources and outcomes of social capital. For the most part, the three studies have taken a qualitative approach to social capital and civil society at the grassroots, drawing from conversations with villagers, interviews with outside actors, and printed sources at the village- and local government level.

The first study, by Mohapatra (2004), describes a large village called Talajanga in the eastern state of Orissa. The village is inhabited primarily by members of peasant castes, with a minority Dalit community (the former "untouchables" or "unclean Hindus"; a broad category comprising many different caste groups across India). Most households have small

landholdings, except for the Dalits who are landless. Mohapatra conceives of social capital as the horizontal "connectedness" amongst villagers (similar to Woolcock's integration term), and focuses on the impact of village-level institutions, positive and negative, on social relations and generalized trust. Talajanga is split into five *sahis* (localities), each having its own elected committee that manages the day-to-day matters of that locality. The committees look after the temples, organize festivals and, to some extent, act as the "moral authority" within that locality and have the power to levy fines on individuals for wayward behaviour. Aside from the sahi committees, a body known as the *Charisahi* Committee, made up of representatives from four of the five localities (the Dalit locality is excluded), is responsible for managing the affairs of the entire village. In this capacity, the Charisahi Committee resolves disputes, coordinates the voluntary labour of villagers for collective work from time to time, and articulates the development-oriented needs of the village to local government agencies, politicians and other actors.

The main observation of Mohapatra is that social capital in Talajanga was dynamic rather than constant, having waxed and waned over a period of several years in response to seminal events in village life. For instance, conflict between two of the localities culminated in the murder of one villager and, a few years later, a second murder resulted from a factional clash within a particular locality. Both events had village-wide repercussions in terms of depletion of trust and collective life. Following the first murder incident, the Charisahi Committee made a concerted attempt to restore peace and promote a sense of village solidarity and, for a period, a higher level of connectedness and collective action was present in Talajanga. After the second murder, however, the Charisahi Committee lost legitimacy with many villagers who increasingly perceived the institution as the preserve of older, elite members who were self-serving. Around that time, another village-level organization involved in various activities for the common good and made up of a younger membership, became more active; in time, the Charisahi Committee felt that its established authority was under challenge, and relations between the two institutions deteriorated. In consequence, village solidarity decreased. Nevertheless, Mohapatra regards the ascendancy of the youth organization as a catalyst for rejuvenation of social capital in future.

Mohapatra's research demonstrates that development of social capital at the micro-level is not necessarily a linear, cumulative process; the sense of connectedness between villagers can be tenuous and even decline rapidly, as happened in Talajanga. Furthermore, this study

illustrates the potential limitations of horizontal forms of social capital at the grassroots, as during the period when social relations were more harmonious in Talajanga, villagers could still not manage to make an unresponsive state address their needs (e.g., an improved access road, tube-wells). Finally, Mohapatra's research suggests that village-level institutions, even when principles of democracy are ostensibly in place, can be dominated by the more powerful villagers; the Charisahi Committee was filled with upper-caste elders, and the Dalits had no representation at all, which served to reinforce existing social inequalities. That social capital, in the form of village-level institutions, can be utilized by elites to extend their hegemony over other groups, is suggestive of Bourdieu's conceptualization.

The second essay, by Jayal (2004), focuses on the Himalayan villages of Jardhargaon and Khavada in the Tehri Garhwal district of Uttaranchal in north India, where the introduction of government programs and panchayati raj led to the erosion of customary structures of cooperation for conservation of forest resources. Jayal's two villages are located in a region that has a history of popular mobilization for forest protection, the most well-known being the Chipko movement during the 1970s; research by other scholars suggests that the less rigid caste order of the hill communities facilitated the coming together of disparate groups for common cause. In Jardhargaon, Jayal relates that the villagers, many of them women who had actively participated in the Chipko movement, organized themselves around 1980 to regenerate a degraded forest tract in their vicinity and thereby replenish their dwindling water sources. A *Van Suraksha Samiti* (Save the Forest Association) was established for this purpose, and rules were formulated for sustainable use of the forest, along with sanctions for their violation; as a result of the villagers' efforts over a twenty-year period, the forest was restored to its former dense cover and water resources augmented. The scope of collective action in the village, moreover, extended to other important activities such as the building of embankments to protect crops against periodic flooding.

This period of participatory governance in Jardhargaon was superseded, however, by increased state intervention in forest management during the 1990s, which brought about a loss of local commitment to natural resource protection. By way of example, a government program was implemented that covered the salary of the forest watchman, which previously the villagers had paid for through collective monetary contributions; several years later, after the program was discontinued, the villagers were no longer inclined to pay for the guard themselves. Following the panchayat (local government) elections in 1996, village traditions

and sense of unity were further diminished. The reaction of many villagers to the new, formal institution of governance was basically that of disillusionment, on account of lack of transparency and accountability, problems of corruption, and sentiment that everything was now being decided from above.

Jayal's other village, Khavada, has a number of parallels to Jardhargaon, most notably the traditional importance of village-level institutions in natural resources management. In Khavada, it was the Mahila Mangal Dal (women's welfare committee) which had assumed responsibility for forest protection, evolving user rules and levying fines for non-compliance, as in Jardhargaon. The activities of the women's committee also extended to cleaning of water tanks, road-building, and an anti-liquor campaign to deal with the problem of men's drinking in their community. Similar to Jardhargaon, the motivation for forest protection in Khavada declined with the increased presence of the state in their everyday lives. The passage of the Forest Conservation Act of 1980, in particular, by which the forest land around Khavada became government property, instilled an attitude that the forests were to be looked after by government officials and, consequently, undermined the informal system of self-help. Furthermore, like Jardhargaon, the holding of state-sponsored local elections for the first time in Khavada in 1996 had the effect of weakening village solidarity, to the point of causing a deep rift in the community. Given that government funds for development were to be channeled through the panchayat and therefore the elected positions offered considerable opportunity for personal gain and material advancement (especially via corrupt practices), the election in Khavada was acrimonious. Villagers in Khavada became split into two rival factions and the election fall-out included bullying and physical intimidation, especially of the Dalits, and even death threats.

To conclude about the Jayal paper, the author contends that, in Jardhargaon and Khavada, traditional structures for natural resources management were indicative of a fairly high level of social capital. In both villages, informal yet well-established habits of cooperation that ensured forest protection were seriously disrupted as a result of increased contact with the state, which seems to contravene the conventional understanding of linking relations as being beneficial to marginalized communities. Furthermore, Jayal argues that stocks of social capital in the two villages did not translate into a propensity for democracy, at least in the formal sense. The weakening of social capital that ensued from state decentralization and initiation of formal processes of democracy at the local level, in Jayal's view, demonstrates a divergence between

the Indian experience and Putnam's thesis that pre-existing reserves of social capital ought to make democracy work better.

The third essay from the Bhattacharyya book, authored by Pai (2004), examines the role of social capital as it pertains to inter-caste relations in six villages from different districts in Uttar Pradesh (UP), again in context of the introduction of panchayati raj in 1996. Pai's methodology differs from the previous two studies in that, besides interviews with village leaders, government officials and other external actors, random household surveys of villagers were conducted. UP is India's most populous state and also one of its poorest; its caste system is considered more hierarchical and reflective of social inequalities in comparison to many other parts of the country. According to Pai, UP exemplifies the segmented character of Indian society, for the reason that deeply-entrenched divisions have produced a "culture of distrust" (with respect to other segments) (2004; 38). Since the mid-1980s, various lower caste groups across UP, particularly the Dalits, have become increasingly assertive and politicized in an effort to challenge the oppressive caste order and thereby secure improved social status and economic standing, along with a greater share of political power. Pai's research describes how the newly-formed panchayats, which provided reservation of seats for Dalits and women, have not only intensified conflict between the Dalits and the traditionally dominant middle- and upper castes in UP, but also sharpened competition for economic resources, social status and political domination *amongst* the different caste groups that constitute the rural poor.

A central argument of Pai is that the context in which social capital operates is salient; in India, the segmentation of society, rooted in caste/class/gender and other divisions, is an important contextual variable that influences relations between groups, formation of trust, and propensity for collective action. That segmentedness, however, is not immutable but, rather, has a degree of fluidity that, in turn, affects social capital. Pai found that, in his sample villages, abundant social capital existed within segments, which generally conformed to caste and sub-caste groups, but did not extend between segments. Though Pai does not use the terminology of bonding and bridging social capital, his intra-segmental relations corresponds to the former and inter-segmental ties the latter. Pai further observed regional differences in inter-caste dynamics in UP. In the villages in western UP, strong bonding social capital enabled one Dalit caste group (Chamar-Jatavs) to challenge the hegemony of the higher castes. The Chamar-Jatavs were able to dominate the panchayats, upon which they monopolized development funds and benefits allocated for the disadvantaged castes in general, making

themselves upwardly mobile but, in so doing, caused tensions with other lower caste groups as well as the upper castes. In the villages in eastern UP, on the other hand, fragmentation within the various Dalit groups precluded contestation of the traditional hierarchy.

Pai's research illustrates that in both areas of UP, the dearth of bridging social capital between segments making up the rural poor population hindered the aggregation of interests and, consequently, collective action that occurred was of a particularistic nature. The UP scenario thus represents a contrast to Kerala where, as the studies by Heller (1996) and Swain (2000) suggest, bonding social capital within segments or groups did not obstruct the formation of bridging ties with other groups, allowing nascent social movements to diffuse and become more broad-based. While the contextual factors that would account for the differentiated pace of social change in UP and Kerala are likely multi-faceted and complex, part of the explanation seems to lie in the dissimilar character of civil society in the two states. In Kerala, the richness of everyday forms of civil society and associational life, which facilitated interaction between groups and segments, provided the social framework for nurturing common interests that, in numerous instances, coalesced into full-fledged social movements. In UP, however, achieving unity of purpose from the bottom-up proved difficult because civil society was more restricted; inculcation of a common identity amongst disparate Dalit groups in the state, which Pai refers to as "communal solidarity," hinged more on the appeals of political parties than on actual social connectedness. As such, the growth of a Dalit social movement as a "network of networks," the modus operandi in Kerala, appears improbable in UP.

Thus, the notion of commonality of Dalits in UP, which was "imagined" or constructed, was not enough to overcome the reality of deeply-ingrained social divisions within this category of groups and, as such, had limited effectiveness in challenging the status quo. In Kerala, conversely, the shared interests of lower castes/classes were grounded in civil society and essentially supported by the state, setting in motion the conditions for state-society synergy that produced meaningful social reform.

The fourth and final rural, micro-level source that I will discuss, published in an academic journal, is Robbins' (2000) case study of corruption in forest management in an undisclosed state wildlife sanctuary and adjacent vicinity in Rajasthan. Robbins' fieldwork was undertaken in 1998 and consisted of interviews with state forestry officials and local villagers, and more detailed oral histories with selected individuals. The wildlife sanctuary

referred to by Robbins was set aside in the 1950s for the preservation of wild fauna, including panther, wolf and sloth bear, and is managed by the state Forest Department. The use of forest resources within the sanctuary is regulated through legislation. Poaching of game species and felling of green trees are prohibited; however, people living in and around the reserve are entitled to extract limited quantities of fallen wood, fodder leaves, grasses and other minor forest products at nominal rates. The Forest Department is dominated by one particular higher caste (Rajputs); the local elite in the vicinity are from the same caste, while the remainder of the population is a mix of caste groups. The form of corruption that Robbins encountered was bribe-taking by forestry officials for essentially looking the other way with respect to illegal acts such as tree-cutting and hunting game. The scale of unlawful timber removal from the sanctuary was such that it was the foundation of an illegal wood economy in the area and, although Robbins did not have conclusive evidence, he ventures that the system of graft payments filters up to the senior echelons of the Forest Department.

Robbins' research is unusual, certainly as far as the Indian empirical work, in its fundamental approach to social capital. Whereas other studies reviewed regard networks, norms and trust, the building blocks of social capital, as qualities or characteristics of society, Robbins applies the same constitutive concepts to the realms of the state and state-society relations. This perspective is compatible with my definition of social capital, but does not seem to mesh with Woolcock's framework which, as mentioned earlier, utilizes the macro-level concepts of organizational integrity and synergy; this ambiguity, however, does not detract from Robbins' work. Robbins explains the pervasive corruption in terms of alternative norms and high trust levels embodied in the social capital of the more powerful groups in the study area, specifically, the strong bonds of solidarity between the forestry officials and the local elites that facilitated cooperation around corrupt practices. In keeping with the generally segmented character of Indian civil society, Robbins found that such bonding relations corresponded to existing divisions based on caste, class and gender.

While social capital produced in this instance substantial profits for insiders, it clearly had negative externalities with respect to reinforcement of social inequality and ecological degradation of the reserve. Robbins' research thus illuminates the potential "downside" of social capital. Interestingly, Robbins contends that the role of social capital in the context of corruption in natural resources management is similar to how it operates in successful common

property management regimes; the only discernible difference is in the nature of norms, being oriented to individual gain in the former case and equity and sustainability in the latter.

Urban-based research:

Turning now to the urban context, only two empirical studies have explored social capital at the micro scale in India. In addition to the paper by Majumdar (1995) discussed in Chapter Four, Weitering and Nooteboom (2004) have studied a group of railway porters at a large station in Mumbai. The authors carried out the bulk of their research on the congested railway platforms, even performing some of the porters' duties to better understand their work and establish rapport. Widely known as "coolies" in India, the porters are not regular employees of the railways and instead work on a license basis; as such, they are completely reliant on fees from passengers and do not enjoy formal rights or welfare benefits. The inferior working conditions of the occupation are therefore fairly typical of India's massive informal economy. In this particular railway station, the large majority of porters are rural-to-urban migrants belonging to the Vanjari caste of farmers from two districts in rural Maharashtra, and many are related through kinship. The main focus of the study is on the self-organization of the porters and institutional arrangements adopted that allows them to collectively deal with the various hardships they face in order to sustain themselves and their livelihoods. Similar to the preceding rural-based case studies, the authors approach social capital predominantly from the standpoint of outcomes, as opposed to sources; accordingly, the quality of social capital within the porter community is inferred from the outcomes they achieved, rather than measured directly as trust, norms and so on.

Weitering and Nooteboom (2004) observed that the porters had established their own mutual-help organization, a so-called porters' partnership, to promote their common interests related to income security, access to credit, and other forms of social assistance. The partnership had a well-defined organizational structure and was governed by an elected committee. Institutional arrangements included an income fund that, through pooling of individual daily earnings (which fluctuated considerably) and egalitarian redistribution, provided the porters with a stable income. Other provisions included credit facilities and a contingency fund for extra-ordinary expenses in times of need (e.g., festivals, weddings, medical bills). This informal social security system was made possible, the authors maintain, by the very strong bonds between members of the porter community (bonding social capital).

The collective accomplishment of the porters is indicative, in other words, of a high level of social capital predicated on long-term commitment, shared objectives, mutual trust, norms of reciprocity, and codes of conduct.

At the same time, Weitering and Nooteboom (2004) note that the porters' partnership and, by extension, their social capital is not without limitations, as the collective funds are finite and cannot insure against all situations and risks. Although porters oftentimes are able to receive supplementary support through their village and kinship ties, the authors stress that formal systems of social security are, nevertheless, needed. In closing, although the authors understandably emphasize the many benefits of bonding social capital for members of the porter community, they do not mention any possible downsides. The argument could be made, though, that the exclusivity of the porter community creates entry barriers for individuals from other groups (i.e., other castes and places of origin).

Delhi's Administrative Set-up

The Government of the NCTD, also known as the Delhi Government, is under the control of the Lieutenant-Governor of Delhi, who is appointed by the Central Government. From 1992 onwards, however, the Delhi Government has had increased popular representation in the form of a Legislative Assembly and Council of Ministers headed by a Chief Minister (Kumar, 1999). Nonetheless, the Central Government has retained authority over important matters in the NCTD such as public order, police and land (Kumar, 1999). Although the NCTD has less than full statehood under the Indian Constitution, the jurisdiction is often referred to as a State and the Government of the NCTD is deemed the state-level government.

The NCTD falls under three local governments: the Municipal Corporation of Delhi (MCD), the New Delhi Municipal Council (NDMC), and the Delhi Cantonment Board (DCB). The MCD is under the authority of central Ministry of Home Affairs, as is the NDMC, which administers the New Delhi area and focal point of the Union Government. The Cantonment area, containing military bases and military housing, is under the control of the central Ministry of Defence. The MCD has elected representation composed of local Councillors and a Mayor; the NDMC and Cantonment areas, on the other hand, do not have elected representation. The administrative set-up of the NCTD is unusual in that all three local bodies are under the authority of the Central Government, rather than the state-level Delhi government (GoI and GNCTD, 2001a).

In addition to the three aforementioned tiers of governance in the NCTD (i.e., central, state and municipal), a fourth tier, corresponding to the zonal or ward level, has emerged in recent years (Mathur, 2005). The fourth tier is an outcome of the 74th Constitution Amendment Act (CAA), enacted by the Government of India in 1992, which contains a number of provisions for the States to amend their municipal laws and take appropriate steps towards strengthening urban governance. One such provision concerns the evolution of decentralized urban governance through the establishment of Ward Committees in the larger cities (i.e., urban population over 300,000). Ward Committees were first constituted in the MCD in 1997, but have not been struck in either the NDMC or Cantonment areas (Mathur, 2005).

The MCD Committees, which are made up of local councillors and government officials, are sanctioned with legislated powers, functions and finances with which to play a role in urban management and service delivery. As such, the Committees are envisioned as means to address the needs of citizens at the lowest level possible in a mega-city such as the MCD (MCD, 2005). In 2005, the MCD had a total of 12 Ward Committees. As the MCD has a total of 134 ward constituencies, each Ward Committee represents multiple wards and, on average, over a million Delhiites; they are, in effect, like zonal committees (Mathur, 2005).

To clarify jurisdictional terms, the National Capital Territory of Delhi is a different entity than the National Capital Region (NCR), which extends over a much larger area (30,242 sq. km.) and includes the NCTD as well as portions of the neighbouring states of Haryana, Uttar Pradesh and Rajasthan (NCRPB, 1999). In this thesis I will, for the sake of brevity, use "Delhi" to refer to the entire National Capital Territory and "Delhi government" to denote the Government of the NCT of Delhi.

Delhi's History

Delhi is an ancient city that has been continuously occupied for over 3,000 years (Dutt and Pomeroy, 2003; Breese, 1974). The earliest urban settlement in the Delhi area is believed to be Indraprastha, founded in the tenth century B.C. on the west bank of the Yamuna River (Singh, 1989). Other cities were built later in the vicinity, including Dillu in the first century A.D., from which the name "Delhi" has derived (Singh, 1989). From the time of Indraprastha, Hindus ruled Delhi for more than 2,000 years until the late twelfth century A.D. (Singh, 1989). Hindu rule ended in 1192 A.D. when Turk and Afgan warriors, who had entered the subcontinent through the mountain passes on the northwest frontier, conquered the city

(Metcalf and Metcalf, 2002; Singh, 1989). Thereafter, for a period of six-and-a-half centuries, Islamic dynasties controlled Delhi, initially during the Delhi Sultanate (1206-1526) and later as the centre of the Moghul Empire in northern India (1526-1857) (Breese, 1974; Metcalf and Metcalf, 2002). The British, who arrived in Delhi in 1803, established a military post there but it was not until 1911 that they shifted the capital of British India from Calcutta to Delhi (Breese, 1974). Delhi was the jewel of the British Raj until 1947, the year that India became an independent republic (Metcalf and Metcalf, 2002).

In all, the various powers that occupied Delhi over the millennia built some 17 cities at different sites with the metropolis's boundaries (Dutt and Pomeroy, 2003). That legacy is most apparent in present-day Delhi in terms of its urban planning and architecture, especially from the Mughal and British eras (Ghosh, 2000). The area now called "Old Delhi," for example, refers to the magnificent walled city of Shahjahanabad built by the Mughal Emperor Shah Jahan[6] from 1638 to 1648 (Dutt and Pomeroy, 2003). Situated on the west bank of the Yamuna River to the north of the Indraprastha site, Shahjahanabad encloses the Red Fort, royal palace and mosques reflecting both Islamic and Hindu influences (Dutt and Pomeroy, 2003). Aside from the historic buildings, much of the walled city has degenerated into a slum area, although it continues to be an important commercial hub for the city (Ghosh, 2000). New Delhi, the part of the city constructed by the British in the early decades of the twentieth century, is also evident in the geometric street layout and imperial style of architecture, and remains the political focal point of the nation (Singh, 1989).

Delhi`s Settlements and Pattern of Urban Growth

Settlements in Delhi fall into eight main categories, a brief description of which is given below:

Squatter settlements:

Known as *jhuggi-jhonpris* or JJ clusters in Delhi, these settlements are scattered throughout the city – along roads and railway lines, around construction sites, in low-lying areas, on slopes of drainage channels and beside the Yamuna River (GoI and GNCTD, 2001a; WWF-India, 1995; Yamuna Action Plan, 2005; Ali, 2003). In affluent neighbourhoods, squatters have encroached on numerous parks (WWF-India, 1995). Nearly all of the land occupied by

[6] In addition to Shajahanabad in Delhi, the Mughal Emperor Shah Jahan also built the Taj Mahal in the city of Agra as a tomb for his beloved wife (Metcalf and Metcalf, 2002).

squatter settlements in Delhi is government-owned, with less than 1 % being private property (Kundu, 2004). The JJ clusters tend to be relatively small; 75 % of the settlements have fewer than 500 households and only 10.5 % have over 1,000 households (Birdi, 1995; Chakrabarti, n.d.). Delhi does not have any huge squatter settlements like Dharavi[7] in Mumbai. JJ clusters in Delhi range in size from 0.4 acres (0.16 hectares) to 50 acres (20.2 hectares), the largest having about 10,000 households and a population of 45,000 (GoI and GNCTD, 2001a). With an average density of 200 huts per acre (494 JJ's per hectare), living conditions are extremely congested (GoI and GNCTD, 2001a). These figures translate into an average space of 20 sq. metres per household, although plots can be as small as 8 sq. metres (GoI and GNCTD, 2001a).

The majority of *jhuggis* (hutments) in Delhi are *katcha* (temporary), assembled with thatched materials, wood scraps, pieces of plastic, and other locally obtained items (Antony and Maheswaran, 2001; WWF-India, 1995). Despite the illegal status of squatter settlements in the city, the government has extended basic environmental services to many clusters, including public standpipes, handpumps and toilet blocks (GoI and GNCTD, 2001a; Ali, 1998). Nevertheless, coverage is limited and, in some clusters, the level of civic amenities is skeletal or nonexistent. Overall, squatters have the poorest access to environmental services among the various settlement types in Delhi (Ali, 1998; Kundu, 2004).

Resettlement colonies:

This category refers to settlements established by government agencies for people relocated from squatter settlements and designated slums, primarily in the inner city area, beginning in the early 1960s (GoI and GNCTD, 2001a; Ali, 1995). The majority of resettlement areas are located in the urban periphery, especially west Delhi and the Trans-Yamuna area (WWF-India, 1995). Resettlement areas are planned neighbourhoods (albeit to lower standards), laid out into small plots and having a modicum of facilities and services (GoI and GNCTD, 2001a; Ali, 1995; Kundu, 2004).

Planned colonies:

These are formal settlements that have been legally sanctioned prior to development and, as such, adhere to planning requirements and building bye-laws and meet a minimum standard of

[7] Dharavi, a squatter settlement in Mumbai, has a population of about one million and is often referred to as "Asia's largest slum" (D'Sousa, 2002).

environmental quality and infrastructure (Sivam, 2003). Neighbourhoods with government flats, employer housing, cooperatives, and middle and upper-income residences would generally be developed according to prescribed norms. Approved colonies are common in New Delhi, the Cantonment area and other parts of the megalopolis (Jain, 1990).

Designated slum areas:

This term refers to specific buildings/properties that have been listed under the *Slum Areas Act* as unfit for human habitation. Also called "notified slums," these are legal settlements. The largest concentration of notified slums in Delhi is found in the older core area, especially within the walled city of Shahjahanabad[8] and vicinity that has hundreds of dilapidated katras (Birdi, 1995; GoI and GNCTD, 2001a).

Unauthorized colonies:

In contrast to the squatter areas, unauthorized settlements are built with the consent of landowners. Housing is constructed on legally owned or rented land, but without obtaining the requisite land subdivision or building approvals from local authorities (Kundu, 2004; Sivam, 2003). A large number of unauthorized colonies in Delhi have sprung up on the urban-rural fringe – on farmland, in areas set aside for greenbelts, and on what is termed "wasteland" in India (e.g., unproductive land, rocky and uneven terrain) (Sajha Manch, 2001; WWF-India, 1995). As municipal services are not extended to unauthorized colonies, the physical environment has become degraded (WWF-India, 1995).

Regularized unauthorized colonies:

These are unauthorized settlements, as described above, that the government has decided to include within the municipal net of infrastructure and services (Sivam, 2003). Despite this objective, provision of civic amenities is partial; colonies regularized in the 1970s have for the most part received services, while those regularized more recently are still awaiting provision (Kundu, 2004). In the settlements that are lacking services, living conditions are substandard (WWF-India, 1995).

[8] Living conditions in the medieval walled city of Shahjahanabad, originally intended to house 60,000 citizens, have become highly congested for the present population of approximately 2 million (Chakrabarti, n.d.).

Urban villages:

As a consequence of urban sprawl across the NCTD land base, many rural villages have become annexed to the Delhi urban area and reclassified as "urban villages," even though they remain essentially rural in character (Agarwal, 2003). Once villages are urbanized, the population grows rapidly and existing levels of infrastructure are no longer sufficient (Sivam, 2003). Although urban villages are entitled to civic amenities, provision is often delayed or does not happen (Jain, 1990). Urban development tends to be haphazard and harmful to village communities, frequently leading to slum-like conditions (Agarwal, 2003).

Rural villages:

This category refers to the rural settlements in the NCTD that have developed over time according to the needs of the community and still remain outside the urban limits (Sivam, 2003). As such, they are not covered under municipal provision of infrastructure and services like the other urban entities.

Pattern of Urban Growth:

Growth of settlements in the NCTD has occurred primarily outside of the official planning process. Of the eight settlement categories, only the planned communities and resettlement colonies, which together represent about 36.5 % of the Delhi population, exemplify the formal system. The remaining 63.5 % of Delhiites, in other words, reside in communities that have developed either organically (e.g., the walled city, urban and rural villages) or else informally (e.g., JJ clusters, unauthorized colonies, regularized unauthorized colonies) (Sivam, 2003). The number of informal settlements has mushroomed over the past several decades – an estimated 1,100 squatter settlements (GoI and GNCTD, 2001a), 1,432 unauthorized colonies (Times of India, 2005), and 607 regularized colonies (Kundu, 2004). Proliferation of unplanned settlements on this scale attests to the importance of informally provided housing as much as it does to the failure of the formal planning system and legal housing market in Delhi (Sivam, 2003).

Delhi`s Urban Environment

Another component of Delhi's air pollution is excessive noise, with the most prominent sources being traffic, industries, construction, and festivals or cultural activities (TERI, 2001). Noise levels in the city can reach 80 decibels (dB) or higher, far above the WHO guideline of

45 dB for cities (TERI, 2001; Bhat, 2003). Several studies have shown that noise pollution is high for all land-use categories in Delhi, including many residential areas and silence zones (e.g., near hospitals and schools). Furthermore, nighttime noise levels can also be quite high because of heavy traffic (TERI, 2001).

Among the various categories of settlements in Delhi, squatter colonies generally have the worst environmental quality because of the combination of lack of civic amenities, overcrowding, exposure to pollution (e.g., water, land, air, noise) and the presence of other hazards in the vicinity (e.g., open dumps, flooding, heavy traffic) (Kundu, 2004). At the other end of the spectrum, living conditions are fairly good in the formal settlements since planning norms have been adhered to and basic infrastructure is usually available. In addition, where public amenities are found wanting, middle and upper-income residents may have the financial resources to make private investments (e.g., installing a tubewell for 24-hour water supply) or the option to move to a different neighbourhood. Falling in between the two poles of environmental quality are the other settlement types – the designated slums, resettlement areas, unauthorized colonies and urban villages (Kundu, 2004). In most low-income settlements, the problem of inadequate community-level services and infrastructure is compounded by adverse environmental impacts, either proximate or at city-scale, which results in inferior living conditions for local residents.

Delhi Government Policy on Squatters and Resettlement Programs

Government policy has shifted in recent decades as far as the basic approach adopted towards squatters and the means of resettlement. After the Emergency, slum clearance did not occur on a major scale over a 20-year period that lasted up to the late 1990s. During that time, the squatter population in Delhi grew steadily to reach and then surpass pre-Emergency levels (Kundu, 2002a). In the 1980s, the policy regime evolved from clearance of squatter settlements to greater emphasis on improvement of existing clusters (GoI and GNCTD, 2001; Risbud, 2002; Bose, 1995). Through government programs, notably the Environmental Improvement of Urban Slums (EIUS), essential community-level services were extended to JJ clusters irrespective of their illegal status (GoI and GNCTD, 2001a; MCD, 2005). The Delhi authorities have also undertaken in situ development of a small number of clusters that, in addition to provision of services, involves modification of settlement layouts and upgrading of dwellings on 12.5 sq. m. plots (Risbud, 2002; Kundu, 2002a). Overall, however, physical

improvement of squatter settlements has been marginal, primarily due to paucity of government funds, piecemeal and ad hoc implementation, poor maintenance of facilities, and increasing numbers of squatters (Kundu, 2004).

Government policy regarding resettlement has also changed, in effect bestowing relocated households with less tenure security than under earlier schemes. Following a Delhi High Court directive in 1992 to restrict transfer of resettlement plots, the government discontinued provision of leasehold titles to individual families in favour of license deeds (Kundu, 2002a). Under the revised scheme, licenses allow newly resettled households to use plots for a limited duration, which can be as short as five years, and stipulate that transfer of possession will result in termination of the license (GoI and GNCTD, 2001a; Kundu, 2002a; Kundu, 2004). Plot size has ranged from 12.5 to 18 sq. m., which is even smaller than the 21-sq. m. norm of the 1960s and 1970s (Kundu, 2004). The other arrangement that has been utilized to discourage property transfer is leasehold titles through cooperative societies, who in turn lease plots to individual households (Kundu, 2002a). For those households that have been relocated since the early 1990s, 11 additional resettlement sites have been developed, all of them in peripheral locations around Delhi (Kundu, 2004).

Although the Delhi authorities have maintained for some time that the urban poor would be relocated "only where necessary," the pace of evictions has picked up in recent years (Kundu, 2004). Since 2000, approximately 50,000 squatter homes in the city have been demolished (Adve, 2004). In 2004 alone, 27,000 households were cleared from Yamuna Pushta, a concentration of riverfront squatter settlements within the central city, for the purpose of developing the tourist and commercial potential of the area (Adve, 2004). A mere one in five Pushta households have been resettled and the remainder dispersed (Adve, 2004). Those who are being relocated are going to several of the newer resettlement sites being developed in Delhi. In a case of history repeating itself from the 1960s and 1970s, the sites are in distant locations, lacking in basic infrastructure and services, and offer limited job opportunities for residents (Adve, 2004).

The urban poor, and the squatter population especially, currently face a hostile climate in Delhi. Opposition to the poor is coming from government authorities, the courts, middle and upper-income neighbourhoods, environmentalists, private developers and entrepreneurs (Risbud, 2002; Kundu, 2004). Squatters remain vulnerable to summary eviction and displacement and there appears to be no political will to give them security of tenure (Risbud,

2002; Kundu, 2004). For the foreseeable future, the overriding development imperative in Delhi is to create a global city. This process will put increasing pressure on urban land for high-productivity economic uses, particularly in the central core (Kundu, 2004). The new Master Plan for Delhi (MP-2021), in its emphasis on improvement of the inner city urban environment for the benefit of the middle and high-income groups who will be able to afford to live and work there, is expected to further push the urban poor to degraded areas on the periphery (Kundu, 2003).

Appendix C: Notes on Empirical Research in the Study Community

This appendix elaborates on the case study approach and specific research methods used, as well as provides the random survey questionnaire instrument and interview outline guides for the three smaller purposive surveys. In addition, the appendix includes discussion related to the empirical chapters that could not be included in the main body of the dissertation.

The Case Study Approach

Definition of terms:

A good place to begin is with the question: what is a case? One definition of a case is "a unit of human activity embedded in the real world" (Gillham, 2000; 1). Thus, a case can have multiple social scales, such as an individual, a group, a neighbourhood, or a community (Gillham, 2000). Furthermore, a case can be a decision, a service, a program, an event, an institution, a role, or a relationship (Cresswell, 1994; Robson, 1993). Whatever the case is, it must have specificity, uniqueness, and be relatively bounded in space and time (Stake, 2000; Gerring, 2004; Cresswell, 1994). Though the case has a unitary character, it is also an integrated system with working parts, and consequently has subsections (Stake, 2000). Moreover, because the case is drawn from the real world, its contextual conditions are considered important – whether social, environmental, economic, political and so forth (Stake, 2000). Although the case has boundedness, sometimes the boundaries between case and context are blurred, which Yin (2003a) and Gillham (2000) contend is especially suited to the case study approach.

Though no universal definition of "case study" exists in the methodological literature, the term is generally understood as "a strategy for doing research which involves an empirical investigation of a particular contemporary phenomenon within its real life context using multiple sources of evidence" (Robson, 1993; 52). This conceptualization emphasizes that case study is a process of inquiry yet, as Stake (2000) observes, it is also the product of that inquiry. Consistent with the definition, case study ought to be viewed as an approach or strategy, rather than a method or set of techniques (such as surveys or direct observation) (Stake, 2000; Blaikie, 2000). Accordingly, case study does not entail a particular way of collecting or analyzing empirical evidence (Gerring, 2004; Blaikie, 2000). As Blaike (2000; 215) puts it: "[A]ny method is regarded as being legitimate." Confusingly, however, the literature at times

does characterize case study as a method.Yin (2003a; 2003b), for example, refers to case study as a distinct method (as opposed to survey, experiment, history, and computer-based analysis), albeit more in the sense of a "meta-method" entailing a range of possible data collection techniques and modes of analysis.

The above definition also stresses that case study research typically involves numerous sources of evidence brought to bear on the particular focus. The reason for variety in sources is first and foremost because no single source of evidence is likely to capture the richness and complexity of the case, which includes the contextual conditions (Gillham, 2000; Yin, 2003b). Use of multiple sources, in turn, allows for illumination of diverse perspectives germane to the case (Rossman and Rallis, 2003). Though most often associated with qualitative inquiry, case studies are not limited to qualitative methods and data (Stake, 2000). Rather, case studies are "methodologically eclectic" (Rossman and Rallis, 2003; 105) and, in principle, can utilize any combination of qualitative and quantitative methods or data collection techniques (Yin, 2003a). Whatever modes the researcher uses, data collection is intensive, which results in multi-layered depth, vivid material and detailed information, or "thick description," characteristic of case studies (Stake, 2000; Rossman and Rallis, 2003). Furthermore, multiple sources of evidence allow researchers to carry out triangulation, a process that clarifies meaning and minimizes misinterpretation of data (Stake, 2000).

Typology of case studies:

Stake (2000) provides a helpful classification of case studies emphasizing the different concerns or purposes that researchers have in undertaking such research. He suggests that case studies fall into three types: intrinsic, instrumental, and collective. In intrinsic case study, the researcher has abiding interest in a particular case and thus the main purpose is to better understand that case. Whether the case can be generalized further or used to build theory is of lesser or no importance. What makes the case of interest to the researcher in the first place can be many things, such as its uniqueness or even its ordinariness (Stake, 2000). Instrumental cases, on the other hand, are examined primarily as an exemplar, that is, to provide insight into a wider problem or issue (Stake, 2000). The case itself is of minor interest, being a means to facilitate understanding of a generic phenomenon and to advance theoretical explanation. In collective case study, the third category, the researcher employs a number of cases with the

express intention of investigating an external phenomenon and contributing to theory. As such, this last type is a variant of instrumental case study, extended to multiple cases (Stake, 2000).

Yin (2003a) proposes another valuable typology that classifies case research according to the predominant form or structure that the study takes, although form is also closely related to the researcher's purpose and the essential nature of the research questions posed. In his conceptualization, case studies are essentially descriptive, explanatory or exploratory (Yin, 2003a). Descriptive case studies, for instance, provide a thorough narrative of the case within its real-life context, depicting significant events, processes and perspectives (Yin, 2003b). This type of case study typically addresses questions of "who," "what," "when" and "where." The richness and completeness of the description may be such that the reader can "experience vicariously" a situation as it unfolded (Stake, 2000; 439). In explanatory studies, the researcher concentrates on presenting data about how and why events or outcomes occurred, which can suggest cause-and-effect relationships. "How" and "why" questions generally explore functional relationships or trace processes over time, as opposed to reporting frequencies or incidence (Yin, 2003a). Evidence that reveals over-time and within-case variation can help to unravel the causal mechanism, which typically involves intermediate links between cause and effect (Gerring, 2004). Exploratory case study, the other broad form, refers to investigation that is done without having pre-specified questions or hypotheses and is, consequently, loosely structured or emergent. Exploratory studies are usually carried out in order to determine feasibility or to design a subsequent research strategy that may or may not utilize a case study approach (Yin, 2003a).

Further differentiation of case study types in the methodological literature includes single- and multiple-case designs (also known as collective cases studies) (Yin, 2003a). Another specification commonly used is holistic and embedded case studies. In holistic studies, the phenomenon of interest is scrutinized at an all-encompassing or global level, which means that there is one unit of analysis (Robson, 1993). The embedded case study, however, has several sub-units to the case, which themselves represent units of analysis. The embedded study, therefore, utilizes different levels of research to deal with the various sub-units, while simultaneously looking at the case in a global way (Blaikie, 2000).

Issues of particularization vs. generalization:

A central tension to the case study enterprise is the extent to which practitioners of this approach concern themselves with particularization versus generalization. The matter of what is distinctive about the specific case continually vies with what is common to other, similar cases. As discussed above, the motives of the researcher figure prominently in the strategic decision to merely present a case on its own terms or to venture into theorizing beyond the case. To Stake (1995; 2000), either stance is equally valid since both contribute to the social construction of knowledge. Stake's position is that the researcher's intrinsic interest in a case is sufficient justification for study of the particular, apart from any commitment to broader generalization. He contends that the majority of case studies in the social sciences originate in such fashion, without researchers necessarily caring what the case is representative of (e.g., in biography, program evaluations, institutional research) (Stake, 2000). Such studies are typically oriented toward maximizing understanding of the particular, to pursuing "what is important about the case within its own world, which is seldom the same as the worlds of researchers and theorists" (Stake, 2000; 439). Aside from the fundamental virtue of particularization, Stake (2000) argues that the urge to generalize runs the risk of overlooking important features or complexities inherent to the case itself.

Stake's defense of particularization notwithstanding, it is generalization that is usually valued in the academic world. According to this view, case studies that do not offer the prospect, at least, of wider abstraction are deemed of questionable worth. With respect to theoretical contribution, though, the case study approach has been maligned for providing little basis for generalization because research findings are always context-dependent, not easily transferable to other situations. The main failing, in other words, is lack of representativeness of single cases or a small number of cases, relative to the population of cases (Yin, 2003a; Gerring, 2004; Stake, 2000). On this point, Stake concedes that a limited number of cases are "questionable grounds for advancing grand generalization" (2000; 448). It is true that conclusions drawn from a specific case cannot be generalized in the probabilistic sense (Rossman and Rallis, 2003). However, Yin (2003a) contends that criticism of the case study approach on representational grounds, which implies a parallel to quantitative sampling that can be extrapolated to a universe, is inappropriate. Instead of seeking statistical generalization, Yin advocates that case study researchers aim for analytic generalization, that is, relating their empirical results to some previously developed theory. Such a strategy means, in effect, that

the theory, rather than the case study, ultimately provides the potential and the scope for generalizing to additional cases (Yin, 2003a).

While not likely to provide grand explanation, case studies nonetheless have heuristic value, which includes generalizing to other cases, exploratory research, and theory development and testing. Regarding generalization to other cases, for instance, case studies can have potential applicability even when the researcher makes no attempt to look beyond the case under scrutiny. This can happen by virtue of the narrative's rich description, which allows readers to vicariously experience the case and subsequently form their own judgments about the relevance of case findings to other situations (Stake, 2000). In this manner, one case study can provide insights about numerous, similar cases (Rossman and Rallis, 2003). Alternatively, the case study researcher can opt to make an explicit connection to other cases, through reasoning by analogy or direct demonstration (Robson, 1993). In reasoning by analogy, the researcher asserts that case learnings ought to be generalizable to other settings on the basis of supportive evidence that conditions in those settings are sufficiently alike to the original case (Rossman and Rallis, 2003; 105). The researcher can also choose to demonstrate, by means of further studies in different settings, that conclusions drawn from the original research have external validity (Robson, 1993).

In addition, case studies are a common approach in exploratory research, such as during the preliminary stage of a more comprehensive research design or for previously unstudied topics (Blaikie, 2000; Gerring, 2004; Stake, 2000). Such investigation can lead to new insights, conceptualizations or hypotheses that may guide subsequent research or else represent an early stage in theory building (Stake, 2000; Berg, 2001; Gerring, 2004). The case study method is also valuable in developing or refining existing theory (Stake, 2000; Yin, 2003a; Blake, 2000). Case studies can present phenomena or complexities that need to be taken into account, as well as extend a theory or otherwise help to delineate its limits (Stake, 2000). Thus, fuller specification of theory may result from a single case study (Vaughan, 1992). Furthermore, case studies are useful in theory testing, which can provide refutation of a universal generalization or corroborate current thinking (Yin, 2003a; Vaughan, 1992; Platt, 1988). Support for theory can be partial as well, suggesting the need for revision of theory and possibly further case studies (Robson, 1993). Finally, because the researcher may be utilizing several theoretical perspectives in a case study, the findings or conclusions can be a mixed bag

– confirmation, contradiction, qualified support, original propositions, and so on (Vaughan, 1992).

Rationales for case selection:

As discussed earlier, the researcher can pick a case purely out of intrinsic interest, without any intention to look beyond the immediate boundaries of the case. However, case selection in instrumental case research, which entails the obligation to generalize or theorize about the larger issue or problem, needs to be justified on other grounds. Yin (2003a) suggests that one rationale, pertinent to either single or collective case designs, is to pick exemplary cases, that is, positive and compelling examples of the phenomenon of interest. Single case selection may be also made on the basis of: the critical case, which is used to test a well-formulated theory; the extreme or unique case; the representative case; the revelatory case, which examines something hitherto inaccessible; and the longitudinal case (Yin, 2003b). For instrumental studies, Stake (2000) recommends that case selection should favour the case from which the most can be learned. He states that "Potential for learning is a different and sometimes superior criterion to representativeness. Isn't it better to learn a lot from an atypical case than a little from a seemingly typical case?" (2000; 446). Stake offers the same reasoning for single-case, embedded designs, stressing that opportunity to learn should be of primary importance for selection of sub-units or "cases within the case" (Stake, 2000; 447).

Justification for Case Study Approach to Sultanpuri:

I justify my use of the case study approach primarily on the basis of the inherent complexity of the real-life phenomenon that I am investigating. The general phenomenon of community-based environmental management is complex, as is my specific case for a number of reasons. To begin with, environmental aspects in the community are multi-faceted, reflecting the presence of two types of settlements having some common, but also different, types of environmental infrastructure and, consequently, an array of related problems. Complexity is also due to my decision to look at not one but four different environmental sectors in the study community. In addition, environmental efforts in the community have been multifarious, ranging from concrete projects and programs aimed at improving local conditions to less tangible efforts in promotion of systemic change in the larger society. Outcomes of those efforts have been a mix of success and failure, rather than clear-cut. Furthermore, from a social

perspective, the community itself has intricacy, since it is not homogeneous and has some level of underlying divisiveness and discord. My subject matter, accordingly, is not short of complexity – environmentally, socially, and regarding the various initiatives undertaken there. As the methodological literature emphasizes that he intensive inquiry characteristic of the case study approach is especially suited to furthering understanding of complex, real-life phenomena (Stake, 2000; Yin, 2003a, Rossman and Rallis, 2003), I would argue that such an approach is appropriate for my research.

Furthermore, my project has the required specificity for a case study. I have chosen as my case an actual place that is bounded geographically (a small community in western Delhi), temporally (the period from 2001 to early 2004), and in terms of a substantive focus (community-based environmental management).

In addition, the case study approach is consistent with the fundamental premise and direction of my research, which is that community-based management must be understood in context (Douglass, 1995; Douglass et al., 1994). Since, in case research, the phenomenon being investigated is drawn from the real world, the specific context is unavoidably significant (Stake, 2000). That is why I conducted the research in the natural setting, i.e., in the community I chose. As a case researcher, I am compelled to focus on my phenomenon of interest in context – in all its particularity – regardless of whether I decide to generalize beyond the case or not. The case study, therefore, is a logical strategy for my project because all of my research questions can be deemed contextual in nature; the first three questions examine important dimensions of the community setting with respect to environment problems, local-level social capital and grassroots collective action, while my fourth question attempts to situate the particular experience of the community in terms of the larger issue of urban governance in Delhi. In keeping with the case study approach, then, I will be making a concerted effort to present the context of the study community and to make an analysis grounded in that context.

A final justification for my employment of a case study is that this mode of inquiry is considered advantageous in addressing "how" and "why" types of questions (Yin, 2003a; Gerring, 2004), a significant part of my research. The depth of analysis in case studies, especially those dealing with single cases, is key in producing explanation about the phenomenon of interest (Gerring, 2004). Case studies lend themselves to such "how" and "why" questions because, as discussed earlier, the analysis can delve into functional

relationships, reconstruct processes over time, explore within-case variation and sometimes uncover cause-and-effect relationships (Yin, 2003a; Gerring, 2004). To sum up, then, the form of my research questions has largely influenced the choice of research strategy taken.

Fieldwork Logistics:

On my reconnaissance trip to India, I lived at the house of a friend in south Delhi that was close to the Development Alternatives office, which I used as a base to begin my research. On my second and third trips, during which I did the bulk of my fieldwork, I stayed at a hotel in Paharganj in central Delhi (near the New Delhi Train Station and Connaught Place). Paharganj is a very crowded and noisy area, popular with foreign tourists and Indian travelers alike because of its many budget hotels and close proximity to the railway station. My hotel was situated about 20 km from Sultanpuri in west Delhi which, given the prevailing traffic conditions, made for a major commute of two to three hours round-trip to my community research site. I attempted to find comparable lodgings that were closer to Sultanpuri, but did not find anything and so remained at Paharganj. Aside from the commuting, though, the Paharganj area was convenient in other respects, such as numerous cyber cafes, inexpensive restaurants, moneychangers, post office, and small shops for most of my day-to-day needs. Also, Paharganj was relatively close to the Lodi Garden/Lodi Institutional Area (about 8 kms away), where there are a number of good libraries and offices of NGOs and other organizations that I visited on a regular basis.

Random Household Survey Questionnaire Instrument:

INTRODUCTION:
Namaste. My name is David Sider and I am a visitor from Canada. I am here to do research about your household and your community. Is the Head of the Household (HoH) present? (IF YES, ASK TO SPEAK TO THE HoH. IF NOT, ASK TO SPEAK TO THE SPOUSE OF THE HoH. IF NEITHER PERSON IS PRESENT, ASK TO SPEAK TO ANY OTHER ADULT HOUSEHOLD MEMBER OR MAKE ARRANGEMENTS TO COME BACK AT A SUITABLE TIME.)

I am doing a household survey about environmental conditions, infrastructure and services, and social organizations in your settlement. I am interested in finding out any concerns or problems that you have, especially regarding water supply, sanitation and solid waste (garbage) in your neighbourhood.

Have you lived in this settlement for one year or longer? (IF NOT, EXPLAIN THAT I WILL NOT BE ABLE TO INTERVIEW HIM/HER BECAUSE WE ARE LOOKING FOR COMMUNITY RESIDENTS THAT HAVE LIVED THERE FOR A PERIOD OF TIME).

I wish to explain that I am an independent researcher from the University of Toronto in Canada. The NGO Sharan is assisting me in carrying out my survey, but I am not working for Sharan.

PARTICIPANT CONSENT SECTION:
This survey is voluntary. You are under no obligation to participate in the survey. Anything you say will be kept confidential and your name will not be used in any reports. If you do decide to participate, you can refuse to answer any of the questions for any reason. I estimate that the survey will take approximately one hour to complete. Do you have any questions?

Do you understand everything I've told you? ____ Yes ____ No
Do you agree to participate? ____ Yes ____ No

Address: _____

Community/Neighbourhood/Settlement name: _____

Date of interview: _____ Length of interview: _____ (min)

Name of field assistant/translator: _____

Gender of participant is: 1 = Male 2 = Female

Participant is: 1 = Head of household 2 = Spouse
3 = Other household member (Please specify) _____

Interview code #: _____

Section 1: Socio-Economic Information

I would like to begin by asking you some questions about yourself and the other members of your household.

a) Socio-Demographic Data

1) How old are you? _____ (years)

2) What is your religion? 1 = Hindu 2 = Muslim 3 = Sikh 4 = Christian
   5 = Other (Please specify) _____

3) What is your caste? _____

4) What is your first language (mother tongue)? _____

5) How many years of school have you completed? _____ (years)

6) Do you rent or own your home? 1 = Rent 2 = Own
   3 = Other arrangement (Please specify) _____ 9 = Refused

7) How many rooms does your household occupy (live in)? _____ (# of rooms)

8) How many people live in your household, including those who live with you part of the year? a) # of adults (18 years or older) _____
   b) # of children (up to 17 years) _____ c) Total # of adults and children _____

9) What is the main job of the adult members of your household?
   a) Head of household _____
   b) Spouse _____
   c) Other male household members _____
   d) Other female household members _____

b) Migration and Mobility

10) Where were you born? Village/district: _____
    Town/city: _____ State: _____

11) How long have you lived… a) in Delhi? _____ (yrs) b) in this settlement? _____ (yrs)

c) Household Expenditures and Assets

12) How much does your household spend on … a) Food each day? Rs. _____
    b) Rent each month? Rs. _____

Does your household have a…?

c) Television	
d) Radio/stereo/cassette tape player	
e) Air cooler	
f) Refrigerator	
g) Bicycle	
h) Scooter/Motorcycle	

1 = Yes
2 = No
9 = Refused

Section 2: Community Issues and Problems

Next I would like to find out what you think about your neighbourhood or community.

13) I wish to find out how you feel about the current living conditions in your neighbourhood (e.g., water supply, toilets, drains, garbage, noise, air quality, etc).

a) Would you describe conditions as very good, good, fair, poor or very poor?

1 = Very good 2 = Good 3 = Fair (Neither good nor bad) 4 = Poor 5 = Very poor
8 = Don't know 9 = Refused

14) How much of a problem is each of these issues to you and your household members on an everyday basis?

a) Earning a living (employment)	
b) Noise	
c) Tenure security (fear of eviction)	
d) Health problems	
e) Water supply	
f) Bad odours in the neighbourhood (from	
g) Mosquitoes	
h) Flies	
i) Rats	
j) Garbage (in drains or lying about in streets	

1 = Not a problem at all
2 = Small problem
3 = Big problem
8 = Don't know
9 = Refused

Section 3: Household Environmental Management

The next group of questions is about water, sanitation and garbage.

a) Water supply

15) Does your household have ...?

a) An individual (private) piped water connection	
b) An on/off tap	
c) A water pump (motor)	

1 = Yes
2 = No
9 = Refused

16) On average, how much water (potable and non-potable) does your household use each day from all sources.... ?

a) In winter _____ # of buckets per day OR _____ litres per day (1 bucket = 15 l.)

b) In summer _____ # of buckets per day OR _____ litres per day

17) Do you purify your drinking water before you use it?

a) Boil it	
b) Filter it	
c) Chlorinate it	
d) Mix with alum	
e) Other (Please specify) _____	

1 = Always
2 = Sometimes
3 = Never
4 = Don't know

IF RESPONDENT DOES NOT TREAT WATER AT ALL, ASK Q. 18

18) (ONLY FOR PARTICIPANTS WHO DO NOT TREAT THEIR WATER) Why don't you treat your water before drinking it?

1 = No time (Respondent thinks the water is not clean, but has no time to boil it)
2 = It is already clean/safe 3 = Waste of energy (electricity/fuel)
4 = Don't like the taste of boiled/filtered/chlorinated water/water mixed with alum
5 = Other (Please specify) _____ 8 = Don't know

19) Do you think that there is a connection between your health and the quality of water in your community?

1 = Yes 2 = No 8 = Don't know 9 = Refused

b) Sanitation

20) Does your household have a private latrine or toilet?

1 = Yes – private toilet in own household 2 = Yes – shared with another household
3 = No – IF NO, GO TO Q.22

21) What type of sanitation system do you have in your household?

1 = Latrine/toilet connected to ground-level drain
2 = Latrine/toilet connected to underground sewer (city sewer)
3 = Other (Please specify) _____ 8 = Don't know

22) Do you think that there is a connection between the condition of drains and your health?

1 = Yes 2 = No 8 = Not sure/Don't know 9 = Refused

c) Solid Waste (Garbage)

23) Do you have a… ?

a) Dustbin inside or outside of your house		1 = Yes
b) Cover for your dustbin		2 = No

24) How often does your household separate your solid wastes into biodegradable, non-biodegradable and recyclable items?

1 = Every day 2 = Sometimes 3 = Never 8 = Don't know

25) Usually, how does your household get rid of your solid waste? (CHOOSE ONE RESPONSE)

1 = Give to government waste collector (door-to-door service)
2 = Give to private waste collector (door-to-door service)
3 = Take to community collection point/bin 4 = Take to open dump in settlement
5 = Beside the house 6 = Into the lane/street 7 = Into a drain 8 = Burn waste
9 = Anywhere 10 = Other (Please specify) _____ 11 = Refused

d) Local park/open spaces

26) How often do you or your household members (including children) use the local park or open spaces in the community to play, relax or work? (NOT AS TOILET)

1 = Never – IF NEVER, GO TO Q. 28 2 = A few times a year
3 = A few times a month 4 = A few times a week 5 = Every day 8 = Don't know

27) What do you or your household members do at the park or open spaces? (CAN CHOOSE MULTIPLE RESPONSES)

1 = Relax/sit 2 = Go walking 3 = Informal socializing 4 = Do a job/work
5 = Attend social functions (e.g., weddings or religious festivals)
6 = Children's play area 7 = Cricket 8 = Other (Please specify) _____

e) Gender aspects, level of satisfaction with services, and cost

28) Which person(s) in your household usually …

a) Obtains the water supply for the household	
b) Manages the water supply in the home (e.g.,	
c) Cleans the family toilet	
d) Disposes of garbage	
e) Teaches children about good hygiene habits	

1 = Head of Household 2 = Spouse 3 = Both HoH and spouse 4 = Daughter-in-law
5 = Girl children 6 = Boy children 7 = Other (Please specify) _____
9 = Refused 10 = Not applicable

29) How satisfied are you with your…

a) Potable water supply (quantity of water)	
b) Potable water quality	
c) Drains (cleaning or maintenance)	
d) Local park/open spaces (maintenance and facilities)	
e) Community toilet	
f) Garbage collection service	

1 = Very good
2 = Good
3 = Fair (neither good nor bad)
4 = Poor
5 = Very poor
8 = Don't know
10 = Not applicable

30) How much does your household pay for …

a) Potable water (every two months)	Rs.
b) Use of community toilets (per day)	Rs.
c) Solid waste collection (per month)	Rs.

Section 4: Social Networks and Social Capital

I would now like to ask you about any community groups or organizations, such as savings groups, religious organizations, youth groups, committees, etc., to which <u>you or any member of your household</u> belongs.

a) Community Groups and Organizations

31) What are the names of these groups? (LIST ALL GROUPS AND ORGANIZATIONS, INCLUDING SHARAN'S ENVIRONMENTAL COMMITTEES, ANY THRIFT AND SAVINGS GROUPS, AND ANY NEIGHBOURHOOD CHIT FUND GROUPS)

_____

_____

_____

<u>IF NO GROUPS, SKIP TO Q.35</u>

32) Of all of these groups to which you or members of your household belong, which one is the most important to your household – that is, the group that you or a member of your household participate in the most (EXCLUDING SAVINGS GROUPS AND CHIT FUNDS)?

_____ (Name of group)

33) The next two questions (Q.33 TO Q.34) are based on the group that you or a member of your household participate in the most – the one you just mentioned. Which member of your household is a member of this group?

1 = Head of Household 2 = Spouse 3 = Girl child 4 = Boy child
5 = Other adult male household member 6 = Other adult female household member
7 = Other (Please specify) _____ 9 = Refused

34) What is the main benefit from joining this group? (CAN BE MULTIPLE RESPONSES)

1 = Improves my household's livelihood 2 = Increases access to services
3 = Benefits the community 4 = Enjoyment/recreation 5 = Spiritual
6 = Social status 7 = Other (Please specify) _____
8 = Don't know 9 = Refused
FOR ALL RESPONSES TO Q. 34, SKIP TO Q. 36

35) (ASK ONLY IF THE PERSON DOES NOT BELONG TO ANY GROUPS) Why did you and your household members decide not to join any of the organizations in your community? (CAN BE MULTIPLE RESPONSES)

1 = No time 2 = No benefits from joining 3 = Dislike/distrust of leaders or members
4 = Not permitted to join 5 = Not convenient (Please specify) _____
6 = Not interested 7 = Not aware of any groups
8 = Other (Please specify) _____
9 = Don't know 10 = Refused

b) Informal Networks

36) How often do you chat (talk informally) with other people in your community?

1 = Every day 2 = A few times each week 3 = A few times each month
4 = A few times each year 5 = Never 8 = Don't know 9 = Refused

37) About how many close friends do you have these days? These are people you feel at ease with, can talk to about private matters, or call on for help.

_____ (# of close friends)

38) If you suddenly needed to borrow Rs. 1000, do you have any friends or associates in the community who could lend you the money (DO NOT INCLUDE FAMILY MEMBERS, RELATIVES, MONEYLENDERS, CHIT FUNDS, SAVINGS GROUPS OR BANKS)?

1 = Definitely 2 = Probably 3 = Unsure 4 = Probably not 5 = Definitely not
8 = Don't know 9 = Refused

39) Thinking about your friends and people who you chat with regularly in the community, are they of the same… ?

a) Caste group	
b) Religion	
c) Gender	
d) Age	
e) Place of origin	
f) Income level	
g) Residential lane in settlement	

1 = Yes, always the same
2 = Sometimes the same (mixed group)
3 = Usually not the same
8 = Not sure/Don't know

c) Trust and Solidarity

40) Generally speaking, would you say that most people can be trusted or that most people cannot be trusted?

1 = Most people can be trusted 2 = Most people cannot be trusted 8 = Don't know

41) How much do you trust … ?

a) Your family	
b) Relatives (in and outside your settlement)	
c) Your neighbours	
d) Your *pradhan* (local chief)	
e) Local politicians (local Councillor, MLA)	
f) Local Government employees	
g) Sharan (NGO)	

1 = To a great extent
2 = To a small extent
3 = Do not trust at all
8 = Don't know
9 = Refused

42) If a community project does not directly benefit you directly, but has benefits for many others in the community, would you contribute time or money to the project?

a) Voluntary help	
b) Money (e.g., Rs. 100	

1 = Will <u>not</u> contribute time 2 = Will contribute time 8 = Don't know 9 = Refused

d) Information and Communication

43) What are your three main sources of information about what the Delhi government is doing (such as provision of basic municipal services, eviction threats, development plans, etc)? (LIST FIRST THREE SOURCES MENTIONED)

a)	b)	c)

1 = Family members and relatives 2 = Friends and neighbours 3 = Newspaper
4 = Radio 5 = Television 6 = Groups or organizations (INCLUDING SHARAN)
7 = Business or work associates 8 = Community leaders (*pradhans*)
9 = Government officials 10 = Local politicians
11 = None

e) Social Cohesion and Inclusion

44) There are often differences between people living in the same community. For example, differences in wealth, income, social status, ethnic background or caste. There can also be differences in religious or political beliefs, or there can be differences due to age or gender.

a) To what extent do any such differences divide your community?

1 = To a great extent 2 = To a small extent 3 = Not at all 8 = Don't know
9 = Refused

b) Do any of these differences cause problems? 1 = Yes 2 = No – GO TO Q.46

45) Which two differences most often cause problems?

a)	b)

1 = Differences in education 2 = Differences in language 3 = Differences in wealth
4 = Differences in social status 5 = Differences between men and women
6 = Differences between younger and older residents 7 = Differences in caste
8 = Differences between long-term and recent residents 9 = Differences in religion
10 = Differences in political party affiliations 11 = Don't know 12 = Refused
13 = Other differences (Please specify) _____

46) In some communities, there can also be anti-social elements like illegal drugs, alcoholism and vandalism. For each of the following, can you tell me whether this is a major problem, minor problems, or not a problem in your community?

a) Domestic abuse	
b) Sexual harassment of women or girls	
c) Theft (of private property)	
d) Vandalism of public property	
e) Fighting amongst men and boys	
f) Alcoholism	
g) Illegal drugs	

1 = Big problem
2 = Small problem
3 = Not a problem
8 = Don't know
9 = Refused

47) In general, how safe from crime and violence do you feel when you are alone at home?

1 = Very safe 2 = Somewhat safe 3 = Neither safe nor unsafe 4 = Somewhat unsafe
5 = Very unsafe 8 = Don't know 9 = Refused

f) Collective Action, Empowerment and Political Involvement

48) In the past year did you or anyone in your household participate in any community activities, in which people came together to do some work for the benefit of the community? (THIS CAN INCLUDE INFORMAL, COMMUNITY-INITIATED ACTIVITIES OR PARTICIPATION WITH LOCAL ORGANIZATIONS, EXCLUDING SHARAN)

1 = Yes 2 = No – GO TO Q.51

49) In which types of projects did you or someone else in your household participate? (LIST FIRST FOUR PROJECTS MENTIONED)

a)	b)	c)	d)

1 = Monitoring the use and maintenance of community facilities
2 = Helping to maintain community facilities 3 = Building/repairing/cleaning drains
4 = Collecting garbage/community clean-up 5 = Awareness generation
6 = Cultural activities 8 = Other voluntary help (Please specify) _____
9 = Don't know

50) Which member(s) of your household participated in community activities?

a)	b)	c)	d)

1 = Head of Household 2 = Spouse 3 = Girl child 4 = Boy child
5 = Other adult male household member 6 = Other adult female household member
7 = Other (Please specify) _____ 9 = Refused

51) Who makes the decision in your household whether household members participate in community activities or not?
1 = Head of Household 2 = Spouse 3 = HoH and Spouse together
4 = Household decision 5 = Each person makes his or her own decision
6 = Other (Please specify) _____ 9 = Refused

52) In the past year, have you or any member of your household gotten together with other community residents to make applications (petitions) to government officials or political leaders for something that could benefit the community?

1 = Yes 2 = No – GO TO Q. 54 9 = Refused – IF REFUSED, GO TO Q. 54

53) Which member(s) of your household has been involved in petitioning?

a)	b)	c)	d)

1 = Head of Household 2 = Spouse 3 = Other adult female member
4 = Other adult male member 5 = Other (Please specify) _____
9 = Refused

54) Do you feel that you have a lot of rights that give you the power to change the course of your life? Rate yourself on a 1 to 5 scale, where 1 means having no rights and being totally unable to change your life, and five means having many rights and full control over your life.
1 = No rights, totally powerless 2 = Very few rights, almost powerless
3 = Some rights, somewhat powerless 4 = Most rights, mostly powerful
5 = All rights, very powerful 8 = Don't know 9 = Refused

55) Voting in elections is one way we can make changes, but many people find it difficult to get out and vote.

a) Do you have a Voter's Identification Card?
1 = Yes 2 = No – END OF INTERVIEW QUESTIONS

b) Did you vote in the last municipal (Delhi) election?
1 = Yes 2 = No 9 = Refused

THANK YOU VERY MUCH FOR PARTICIPATING IN THIS SURVEY.

VISUAL OBSERVATIONS:

1) Ground-level drain in front of dwelling? 1 = Yes 2 = No

2) Have any of the following been constructed over drain in front of house?

a) Latrine/toilet	
b) Work platform/multi-purpose platform	
c) Walkway to house (stones over drain)	
d) Permanent, illegal drain coverage	

1 = Yes
2 = No
3 = Not applicable

END OF QUESTIONNAIRE INSTRUMENT

The Random Household Survey

Sampling Strategy:

One added wrinkle with the sampling had to do with multiple-household plots in the resettlement area. Multiple households occupied some of the plots in the resettlement area that had a second or third storey, yet no enumeration existed of individual households. I decided to sample every tenth plot in the resettlement area, rather than every tenth household, because that was much simpler to do. Surveying every tenth household would have required making a household census of the entire resettlement area prior to doing my survey, which would have been time-consuming. I believe that the number of multiple households was likely a small proportion of the total number of resettlement area plots, judging by the low percentage of renter households (15 % of my sample from the resettlement area). Some of the renter households may have had a landlord household occupying the same plot; on the other hand, renter households could have been sole occupants of a plot in instances of absentee landlords. In short, the sampling strategy I utilized probably under-represents to a small degree the resettlement area households and, correspondingly, over-represents the squatter households relative to the entire study area. However, since the number of resettlement households in the study area (about 1200 households) is fairly large compared to the number of squatter households (165 households), I would argue that this flaw in my sampling strategy is minor.

Pre-Testing Phase and Survey Administration:

As mentioned in Chapter Six, I started off with a questionnaire design consisting of 72 questions, which I had developed in Toronto. In Delhi, I solicited the input of Saahasee and members of my academic committee at the University of Toronto regarding the content, cultural appropriateness and wording of the questionnaire instrument. Both sets of reviewers felt the instrument was too long. I then pared down the number of questions to 60, and had the questionnaire translated from English into Hindi. At this point (in April 2003), I pre-tested the design in the Sultanpuri community (10 interviews in total). As a result of pre-testing, I made further modifications to the questionnaire for both content and length. This involved re-working several questions and closed responses to better match the conditions and level of environmental infrastructure and services present at Sultanpuri, as well as further reducing the number of questions to 55. This became the version that I used to administer the survey. While I would have liked to have had more environmental and social capital questions in the final

questionnaire instrument, including at least the entire core set from the World Bank's social capital questionnaire, this would have made the interviews too long (i.e., an hour-and-a-half or more).

In the actual survey, all respondents were adult residents who had lived in the study community for a minimum of one year. Most survey participants were either the head of the household (HoH) or spouse, although we did interview other adults such as the son, daughter, daughter-in-law and other members. Depending on the preference of survey participants, interviews took place either inside residents' homes or outdoors in the lanes. Interviews were conducted during the day on weekdays (no evenings or weekends), with each interview taking one to one-and-a-quarter hours to complete. We generally did four to six interviews per day, the number being contingent on the availability of respondents and how talkative they were. On the whole, most survey participants were very interested, cooperative and hospitable, inviting us to sit on their *charpoy* (woven cot) and many offering us water, tea or biscuits during the sessions.

With respect to basic interview procedures, my field assistant made initial contact with potential participants, either speaking to residents if outside the house or else knocking on the door. Then, in Hindi, I introduced myself as a researcher from Canada and explained about the purpose of the survey. Next, my field assistant informed householders about the voluntary, confidential nature of the survey and obtained consent. Once the interview commenced, my field assistant asked the questions, while I recorded responses on the questionnaire form. This worked out well because I could follow along, assess the inherent logic of responses, ensure that no questions were skipped, and ask for clarification when needed. I was thus able to have an active role in the interviews, even with my limited Hindi. The other benefit of this system was that in situations where there was a crowd of people and numerous people talking, my assistant could concentrate on asking the questions and listening to the respondent, without having the extra task of filling out the questionnaire form. Both of my assistants were adept at providing me with instantaneous translation from Hindi to English during interviews, which I appreciated. This was done selectively and in such a way as to not unduly disturb the flow of the interview.

Quite often during interviews, participants wanted to converse about a variety of topics not directly related to the survey, which we allowed to happen within reason, so as to increase the comfort level of respondents and gain trust. At the same time, many respondents went

beyond the framework of the questionnaire to provide valuable information that was very relevant to the survey questions. This included factual information, as well as various comments, opinions, examples and incidents, that elaborated upon the basic questionnaire response provided and added to the quality of data collection. Such information I recorded during the course of interviews in the margins of the questionnaire form or on extra sheets if needed. At the end of the interview, my field assistant and I always thanked the participant for his or her time and excellent answers.

During the course of the household survey, it became apparent to me that the location of interviews had a bearing on data collection. Given the choice of where to do interviews, about one-third of respondents preferred to do the interviews inside the house and the other two-thirds opted for the lane. Whereas the interiors of dwellings were relatively quiet and private, the lanes were typically lively spaces bustling with activity. In the lane environment, children played cricket and other games, women and girls did household chores, neighbours sat and talked, groups of men played cards, and cows and other animals wandered around. Frequently, interviews held in the lanes attracted curious onlookers, ranging from a handful of people to crowds of ten, twenty or more. Onlookers included other household members, children in the vicinity, neighbours, and passers-by. At times, these public interviews tended to become something of a free-for-all, with numerous people talking and expressing their views at once, making it a challenge to focus on the actual respondent.

As one would expect, many respondents tended to be more forthcoming in their responses when interviews were conducted within the confines of their homes and less so when held in the lanes. This was the case, especially, concerning several questions that proved to be rather sensitive (to be elaborated below). It did appear that some residents were uncomfortable responding in front of their neighbours and, in some instances, even other family members. From the standpoint of data quality, it was better in my view to conduct the interviews indoors where there were fewer distractions, but I wanted respondents to choose the location so as to put them more at ease and hence we often found ourselves interviewing in a crowd in the lane. In these situations, my field assistants and I endeavored to sit beside respondents or as close as possible to them when asking questions, in order to achieve some measure of privacy within a public space.

It became evident during the course of the survey work that some residents in the community had unrealistic expectations of me in regards to serious problems that many were

facing. For instance, numerous respondents asked about jobs for themselves or family members. This occurred, not only during interview sessions, but when my field assistants and I walked around the community. Other survey participants requested help with family health problems such as tuberculosis. Several respondents showed us their children who were physically disabled or had burns (usually as a result of accidents involving boiling water in the home). Furthermore, a number of residents seemed to think that my survey would lead to tangible improvements in the community in the near future, such as better infrastructure or services, which I had to explain was not likely to happen. Not unexpectedly, too, some community members who were struggling financially asked for money.

Interview Outline for Environmental Committee Members:

Part 1: Questions for Committee Leaders

Note: Questions identified below with an asterisk are "core" questions that were asked of all committee leaders; other questions from the list were asked depending on the availability and interest of respondents.

a) Committee Background:

1) What is the name of the committee?*
2) What is the purpose or objectives of the committee?*
3) When was the committee formed (month and year)?*
4) How was the committee formed?*
5) What external assistance does the committee receive (e.g., funding, technical assistance, administrative help, etc)?*
6) What documentation, if any, exists about the committee (e.g., committee charter, meeting minutes, project reports)?

b) Membership:

7) What neighbourhood (e.g., E1, E6 or E7) does the committee represent?*
8) What is the number of active members (names and house #'s)?*
9) What is the number of non-active members (names and house #'s)?*
10) What is the composition of the committee (e.g., male vs female, age range, religion, caste, region of origin, education level, occupation, income level)?
11) How do local residents become members of the committee?
12) Is the membership increasing, decreasing, or staying around the same over time?*
13) What proportion of the total membership regularly attends meetings?
14) Were some members involved in the micro-planning exercise held in 2001?

c) Activities and accomplishments:

15) What are the current activities or projects of the committee?*
16) What are the past activities or projects of the committee (dates needed)?*
17) What have been the successes?*

18) What have been the factors that contributed to success?
19) What have been the failures, or partial successes?*
20) What have been the reasons for the failures or partial successes?

d) Governance:

21) How often are meetings of the committee held?*
22) Does the committee have a formally designated leader(s)? If not, an informal leader(s)?*
23) How is the leader chosen?*
24) How are decisions usually made on the committee?*
25) Does the committee share information and decisions with the neighbourhood or community? If so, how?

e) Linkages:

26) Does the committee currently have interaction with other environmental committees or community-based organizations (horizontal relationships)? If yes, which ones?*
27) In the past, has the committee had interaction with other environmental committees or community-based organizations? If yes, which ones?
28) Does the committee currently have involvement with external stakeholders (e.g., government officials, local politicians, NGOs) (vertical relationships)? If yes, which ones?*
29) In the past, has the committee had involvement with external stakeholders? If yes, who?
30) Is the committee currently involved in the larger political process and decision-making arena (e.g., Right To Information applications to local government)?*
31) In the past, has the committee been involved in the larger political process and decision-making arena? If yes, how?

Part 2: Questions for Committee Members

Note: Questions identified with an asterisk are "core" questions that were asked of all committee members; other questions from the list were asked depending on the availability and interest of respondents.

a) Personal Involvement:

1) Which committee are you a member of?*
2) When did you join this committee (month and year)?*
3) Are you currently an active or a non-active member?*
4) What type of work have you been involved in as a member of the committee?*
5) What are your duties and responsibilities as a member?
6) How much time (e.g., hours per week or per month) do you devote to committee work as a member?*
7) How did you become involved with the committee?
8) Were you involved in the micro-planning exercise held in 2001?

b) Motivation:

9) Why did you decide to become a member of the committee?*
10) What do you enjoy, or get satisfaction from, as a member of the committee?
11) What do you not enjoy as a member of the committee?

1) c) Work of the Committee:

12) Do you think that the work of the committee is benefiting your neighbourhood or community? Why or why not?
13) What do you feel have been the successes that your committee has achieved?*
14) What have been the failures, if any, of your committee?*
15) What difficulties or challenges has your committee faced in its work?
16) What do you think your committee needs to do in the future?*

d) Governance:

17) When your committee has meetings, do you feel that all members can talk freely in the group? Why or why not?*
18) Do you think that your committee works well together to accomplish its goals?*
19) Do you feel that your committee leaders are capable and effective?*
20) Does your committee regularly share information and decisions with the rest of the neighbourhood or community?
21) Would you say that most members of the committee attend meetings and help out with committee work?
22) How are important decisions usually made on your committee?*

e) Benefits and Costs of Participation:

23) What benefits do you personally receive through your involvement with the committee (e.g., pay, self-esteem or confidence, social interaction, useful contacts, status in the community)?*
24) What costs have you personally incurred as a consequence of your involvement with the committee (e.g., time, money, family or spousal opposition, hostility from other people in the community)?*
25) What obstacles or difficulties, if any, have you faced in your work with the committee?
26) Can you think of any ways to overcome these obstacles or difficulties?
27) (FOR NON-ACTIVE OR FORMER MEMBERS ONLY) Why are you not active now?*

Purposive Survey of Environmental Committee Members

Each of the four committees had a designated leader, or several individuals who formed a leadership group, as well as members-at-large, all of whom were local residents of the study area. I was able to obtain the names and house numbers of committee members by finding out from Saahasee who the leaders were and, from those people, learning the identity of members. Most of the members described themselves as active, though some reported that they were no longer engaged. I decided, though, to interview everyone in the community who had participated on the committees at one time or another, reasoning that those who were involved in the past could shed light on the origins of committees, early efforts, and reasons why they were no longer active.

Since the two question sets were longish and open-ended in format, I selected a "core" group of 15-20 questions from each and, depending on the availability and interest of the members, asked further questions when possible. The core questions have been identified with an asterisk in the above list. The set of questions derive partly from an interview guide for community organizations used by Desai (1995) and the section on Groups and Networks from the World Bank's (2002) social capital questionnaire.

Given the distractions inherent with interviewing in the lane environment at Sultanpuri and because interviews with committee members tended to be longer than in the random survey, I arranged for a vacant room at the local community centre to conduct these sessions. We sat on the floor with our respondents at the centre, following the norms for informal meetings in a community such as Sultanpuri, and offered tea and biscuits to them as a token of appreciation. Most of the community member interviews took place at the centre, which being relatively quiet and private was more conducive for interviewing, though we did meet with a number of individuals at their homes if they were not able to leave for whatever reason. Usually, it took about one hour for the questionnaire and another half-hour or more for the semi-structured interview. Due to time constraints of respondents, some were not able to do both the household questionnaire and the semi-structured interview in one meeting, in which case we did the questionnaire in the initial session and arranged a second time for the semi-structured part.

The questionnaire component was administered in the same way as in the random survey, with my field assistants asking questions and me doing the recording. To an even greater extent than in the random survey, committee members provided valuable, unsolicited information that went beyond the structured questionnaire instrument. The open-ended part of the interviews were conducted as follows: I decided which question to ask the respondent, my assistant would ask the question in Hindi, the respondent would respond in Hindi, my assistant would translate the response into English, and I would make notes in English in my field journal as we went along. I appreciated the instantaneous translation, which enabled me to ask for clarification at times and was useful in choosing the next question from my list. Overall, the committee members were very helpful and no major problems were encountered with this phase of the research. A number of the committee members, especially the leaders, were extremely forthcoming and generous with their time, meeting with me on three or four occasions. The survey of committee members went fairly smoothly, with no particular

difficulties encountered except for unproductive time spent looking for specific individuals to interview.

Interview Outline for Community Leaders

Note: Questions identified below with an asterisk are "core" questions that were asked of all community leaders; other questions from the list were asked depending on the availability and interest of respondents.

a) Background:

1) How long have you been a pradhan (or leader) in this community?*
2) How did you become the pradhan (leader)?*
3) What kind of work do you do as the pradhan (leader)?*
4) What types of problems or concerns do people bring to you?*
5) How much time each week do you devote to your work as a pradhan (leader)?*
6) Do you enjoy your work as a pradhan (leader), or is it frustrating and difficult sometimes?*

b) History of area/Current problems:

7) How many years have you been living in this settlement (E-block)?*
8) What changes have you seen in the community since you came to this settlement?
9) What changes have you seen in the community in the last 2-3 years?*
10) What are the most important problems that the community is facing today? Please explain.*
11) What would you like to see happen in the future with this community?

c) Constituency:

12) How often do people from the community come to you with their problems (approximate # times per week or per month)?*
13) Are these people who come to see you from all over E-block, or mostly from your immediate neighbourhood?*
14) Is it mostly men who come to discuss problems? Or women too?
15) Is it mostly people from the same religion as you who come to discuss problems? Or other religious groups also?
16) Is it mostly people from the same caste group as you who come to discuss problems? Or other caste groups too? (IN OTHER WORDS, IS THE PRADHAN AN AREA PRADHAN OR A PRADHAN FOR A SPECIFIC CASTE GROUP?)*
17) What specific problems or issues does your own caste group face?

d) About the PLUS Project:

18) Do you know about the PLUS Project that started in the community in 2001?*
19) Do you ever talk to any of the PLUS staff or community mobilizers?
20) Were you involved in the micro-planning?
21) Have you had any direct involvement with the PLUS Project (e.g., been a member of any committees, attended any PLUS meetings, made suggestions to PLUS staff, etc)?*

22) What do you think have been the accomplishments of the PLUS Project? What have been the reasons for the accomplishments?
23) What do you think have been the failures of the PLUS Project? What have been the reasons for the failures?

e) Contacts and networks:

24) Do you ever meet with ....any other pradhans (leaders) in the area to discuss community problems or issues?*
25) ... any government officials?
26) ... any politicians?
27) ... any other groups or organizations in or outside the community?

f) Cohesiveness of community:

28) Do you think that most people in the community get along well, or are there serious problems?*
29) Do you think that people in this area can work together well and cooperate to achieve goals for the betterment of the community?
30) Do some groups in the community not get along with other groups, or fight with other groups? Which groups and why?

g) Specific issues:

31) MAINTENANCE OF COMMUNITY FACILITIES - Do you think that there is a maintenance problem with community facilities (e.g., big park, drains, toilet block)?*
32) CRIME AND VIOLENCE – How serious a problem do you think this is in E-block? What can be done about crime and violence?
33) WOMEN'S ISSUES – Do you think that women (and girls) face any special problems in the community?

Purposive Survey of Community Leaders

Names and house numbers of community leaders were obtained through Saahasee or else through asking residents in various neighbourhoods in the study area. A number of the questions used derive from the interview outline for community leaders developed by Desai (1995) in her research in Mumbai slums. Sessions with leaders were held at the community centre or their homes, and required about one to one-and-a-half hours (sometimes completed over a couple of meetings). As was the case with the committee members, my field assistants provided translation from Hindi to English during the course of interviews and I made notes in my journal.

Interview Outline for External Stakeholders

Part 1: Questions for NGOs

a) Introductory questions/General NGO objectives and approaches:

1) What is your official position with your organization and what do you do there?
2) Could you explain the objectives and programs of your organization with respect to slum communities in Delhi?
3) In which slum communities in Delhi are you working? What types of programs and projects are being carried out in those communities?
4) What have been the achievements of your organization's work in the city's slum communities?
5) What have been some of the obstacles you have encountered in your work in the slum communities?
6) In general, how important do you feel it is for slumdwellers in Delhi to participate in the formulation of plans and to participate in their implementation, in order to improve social and environmental conditions in their settlements?

b) History of involvement with the study community:

7) Could you outline the history of your organization's involvement in the study community?
8) Generally speaking, how would you describe the current relationship between your organization and the study community?

c) Specific environmental issues/Environmental programs (IF APPLICABLE):

9) How would you describe general environmental conditions in the study community?
10) What are the problems and challenges that residents face regarding water supply, sanitation and solid waste management?
11) What strategic approaches does your organization take to improve environmental management in the settlement?
12) In what types of environmental programs and projects is your organization involved in the settlement? Please explain.
13) What have been the outcomes of these programs and projects for the study community?
14) To what extent has community management been achieved in the community?

d) Relationships with community leaders and community organizations:

15) What is the role of the community leaders in the settlement?
16) In what ways do you work with community leaders?
17) What is the role of the community organizations in the settlement?
18) To what extent has community development occurred as a result of grassroots mobilization and community organizations?
19) Which community organizations in particular have you worked with interacted with in the settlement? What have been the outcomes of this interaction?

e) Relationships with other actors:

20) In your work in the area of environmental management, do you interact with or network with other NGOs or voluntary organizations that are working in the study community? If yes, which organizations and what have been the outcomes of this interaction?
21) Do you work with different government departments and agencies? Which departments and agencies in particular? What have been the outcomes?
22) How would you describe your relationship with the relevant government departments?
23) Do you have contacts with politicians and to what extent have these political connections facilitated or hindered your work in the study community?
24) Have you found that the interest of a politician in a particular project increases the success rate of the project?

Part 2: Questions for Government Officials

a) Introductory questions/Association with the study community:

1) What is your official position with the government?
2) What are (or were) your specific duties and responsibilities in the community?
3) How long have you personally been working in this particular community?
4) When did you last visit the settlement (ONLY FOR RESPONDENTS NOT CURRENTLY WORKING IN THE COMMUNITY)?

b) Community-government relations:

5) Do you face any difficulties or challenges in your work in the community?
6) Does the community ever make any particular demands of you and your department (e.g., new infrastructure, improved services, etc)? If yes, what has been the response of your department to those demands?
7) How does the community voice their demands of you and your department (i.e., through what mechanisms or channels)?
8) Which community organizations, if any, have you or your department interacted with in this settlement? What have been the outcomes of this interaction?
9) How would you describe relations between the community and your department?

c) Relationship with NGOs:

10) Do you work with any NGOs or voluntary agencies that are active in the settlement? If yes, then in what manner? What have been the outcomes of this interaction?
11) Are you aware of the PLUS Project? If yes, what has been your involvement with PLUS?
12) What do you think have been the successes in the community to date under the PLUS Project?
13) What do you think have been the failures to date under the PLUS Project?

d) Relationship with local politicians:

14) Do you ever come in contact with any of the local politicians in the course of your work? If yes, what kind of interaction have you had?
15) Does the interaction with the local politicians help or hinder your work in any way?

e) Attitudes toward community participation/management:

16) In general, how important do you think it is for slumdwellers in Delhi to participate in the formulation of plans and to participate in the implementation of them, with regard to improving social and environmental conditions in their settlement?
17) At the moment, is your department encouraging in any way the participation of the slumdwellers in their own development?

Purposive Survey of External Stakeholders

Once again, a number of questions originate from Desai's (1995) research on Mumbai slums. Interviews were held at the community centre with those respondents who ordinarily worked in the area; with the others, such as the senior government officials and private consultants, interviews were held at their offices in other parts of Delhi. About half of the interviews were conducted in Hindi, and half were done in English. Length of interviews ranged from a half-hour to two hours.

Interview Outline for Macro-level Key Informants

a) General slum problems and issues in the city:

1) What do you think are the most important problems and challenges regarding slum communities in Delhi?
2) How do the urban poor in Delhi contribute to the city – economically, socially, and from an environmental perspective?
3) In what ways are the urban poor marginalized with respect to living spaces, livelihoods, and provision of basic urban services?
4) What is your perception of social conditions in the slum settlements in the city?
5) Why have so many rural migrants come to Delhi over the last several decades (e.g., push-pull factors)?
6) Do you think it is possible to create "Cities without Slums," which is one of the stated goals of the Draft National Slum Policy?

b) Urban environment and community-based management:

7) How does provision of municipal services and local environmental conditions in the middle- and upper-income colonies of Delhi compare to the slum communities?
8) What is your impression of environmental conditions in Delhi slums, especially with regard to water supply, sanitation and solid waste management?
9) How prevalent are community-based approaches to environmental management in the city? How widespread are community-based approaches in the low-income settlements, specifically?
10) Do you know of any examples of community-based environmental management in Delhi? Are you familiar with any success stories?
11) In general, how important do you believe it is for slumdwellers in Delhi to participate in the formulation of plans and to participate in their implementation, in order to improve social and environmental conditions in their settlements?

12) What obstacles exist to community-based management in the slum settlements in Delhi?

c) Delhi and urban governance:

13) To what extent are the urban poor considered legitimate partners in the development of the Delhi, or are they viewed merely as "beneficiaries" or a profound problem? Are views changing and, if so, why?
14) How equitable is the allocation of state resources in the city, such as in provision of basic services, across different economic strata?
15) Has the Delhi government adopted any pro-poor policies in recent years? If so, have the poor benefited at all from any of these policies?
16) Has the Delhi government adopted any anti-poor policies in recent years? If so, what has been the impact on slumdwellers (e.g., forced relocations)?
17) In general, how would you characterize the relationships between low-income communities and local politicians in Delhi? How common is the culture of patron-client relations between communities and politicians? How widespread is the practice of
1) vote-buying? What factors encourage or perpetuate clientelism?
18) How do you think recent policies of economic liberalization, privatization and globalization will likely impact the urban poor in Delhi in coming years?

d) Governance-related topics (TO BE ASKED IF RESPONDENT HAS KNOWLEDGE):

19) Bhagidari: Is the Delhi Government's Bhagidari initiative (the city's new model of urban governance calling for a community-government partnership in problem-solving) improving democratic governance in the city? What have been the achievements so far under Bhagidari? Has the initiative benefited the low-income settlements in Delhi, or predominately the middle and upper class colonies?
20) 74th Amendment to the Indian Constitution: Has the amendment resulted in meaningful devolution of decision-making to the local level?
21) Right to Information Act (RTI): Does the legislation give ordinary citizens an important tool to exercise rights to which they are entitled? Will the act empower communities to gain access to information, to demand higher levels of accountability, and to increase transparency in the system?
22) Delhi Master Plan 2021 (the new Master Plan currently being drafted): In your opinion, what are the likely implications of the plan for the urban poor in the city? Would the objective of making Delhi a global city, to be achieved by liberalizing the land market and relaxing regulatory controls, further marginalize the existing poor in the city?
23) Citizens' Charters: Has the development of Citizens' Charters within the Delhi Government led to any democratic reform, or does the initiative exist only on paper at this stage?
24) The Draft National Slum Policy: Does the document set out a legal and policy framework for integrating low-income settlements into urban centres? Is the emphasis on in-situ development of slums a good idea?

Macro-level Key Informants

The first section poses broad-spectrum questions concerning the array of challenges faced by low-income communities, the contributions of the urban poor to the life of the city, social

conditions in the poorer areas, and reasons for the proliferation of slums and squatter settlements in Delhi. The second part inquires about the allocation of municipal infrastructure and services across the poor and more affluent parts the city, environmental conditions in slums, the extent of community-based approaches to environmental management, and the need for bottom-up development. The third section, which focuses on urban governance in Delhi, asks respondents for their views on the inclusiveness of governance structures in the city, the impact of pro-poor and anti-poor government policies, and relationships between slumdwellers and politicians. The last part of the guide asks about specific governance-related issues such as Bhagidari (the Delhi Government's new model of urban governance that calls for a community-government partnership in problem-solving), the Delhi Right To Information Act, and the Delhi Master Plan 2021.

Whereas the community-level research was conducted almost exclusively in Hindi, I was able to interview all key informants in English. These interviews took place in Delhi, usually at respondents' workplaces, and lasted from 30 minutes to one-and-a-half hours. Due to the breadth and complexity of questions in my interview guide, it was not possible to ask all questions of each informant within the allotted time; consequently, I priorized a subset of questions for each interview. I recorded informants' responses in my field journal during the course of interviews and, when needed, expanded on my notes later the same day. Generally speaking, the quality of interviews was good, especially those with the academics and NGOs. No significant problems were encountered with this phase of the research, other than difficulty accessing several government bureaucrats whom I wished to interview.

General Constraints in the Study Community

Though I was not unduly worried about safety while in the community, a few incidents occurred that made me exercise caution and stay alert. On one occasion, for instance, while walking through the squatter settlement, a man emerged suddenly from one of the huts and began to chase after me, upon which my field assistant urged me to keep moving and leave the area immediately. The man, who was wearing torn clothes and in a distraught state, followed us out of the squatter settlement and was very persistent. By chance, a pradhan in the vicinity saw what was happening and intervened, physically restraining the fellow and counseling him for a while, and eventually escorting the man back to his house in the squatter area. Aside from this episode, we had encounters with local drug addicts who followed us as we conducted

interviews in the lanes, as well as men who were drinking and sometimes came up to us. Fortunately, my field assistants were able to handle these situations with maturity and tact.

Moreover, research in Sultanpuri involved some health risks, mainly to do with unsafe water, mosquitoes and flies, close contact with residents who had tuberculosis and other diseases, and stray dogs. As mentioned earlier, residents often offered water or tea to my research assistants and I during the course of interviews, which I usually tried to decline as gracefully as possible, bringing a water bottle along for that purpose. Sometimes, however, residents went to the effort of making tea and placing it in front of me, which was harder to refuse and I tended to partake in these situations so as to not offend anyone. As far as the mosquitoes and flies, they were more of a problem in the hot weather when sitting outside doing interviews in close proximity to dirty drains and garbage. I did not take any preventative steps against insect bites, other than anti-malaria pills. As there was a high incidence of tuberculosis in the community, a degree of exposure was unavoidable and we interviewed a number of people who were TB patients, sometimes within the cramped quarters of their houses. About the stray dogs that roamed around the community, my field assistants and I exercised caution, at times not venturing into lanes when animals appeared menacing. All in all, through, I did not have any serious health problems during the fieldwork, excepting a bad rash that I thought might be shingles but was a result of mosquito bites.

Yet another challenge in the fieldwork pertained to the relationship I had with my NGO affiliate, which was trying in some respects. For instance, though the director of the organization appeared enthusiastic about my research during several exploratory meetings prior to my decision to work with them (which was a major reason I chose this NGO), it became apparent to me later on that his interest level, and that of the organization as a whole, was limited. This was rather disappointing, as I was hoping to find "kindred spirits" and my intention had been to share my research with the organization and give something back to them and the community. Since the director had been my initial contact with the organization and was the main decision-maker there, I attempted to work with him in the early stages of my research but that was problematic as he was seldom in Delhi and difficult to contact when travelling Thereafter, I dealt primarily with the second-most senior person in the organization about the more important matters pertaining to my research, since he was available in the head office in Delhi. Another fellow in the NGO, who was genuinely interested in my research and had spent a fair amount of time working in the study community and, thus, was my main

source of support, unfortunately left Delhi to go to the UK halfway through my fieldwork, having become disenchanted with the organization and deciding to try his luck elsewhere. Once this person left the scene, working with this organization became tougher.

My experience with the NGO was that they were poor at acknowledging and returning phone calls, slow regarding information requests, and reluctant to share documentation about the PLUS Project. My research aside, I found their work culture to be slack and lacking in dedication to the mission of the organization. Though I certainly could not have expected my research to be a priority to my NGO affiliate, I nonetheless felt that the communication channels, spirit of cooperation, and professionalism could have been better.

A couple of other things of a financial nature rankled me concerning the senior NGO management. Early on in my relationship with the organization, I offered to provide a small gift or pay money to each community member whom I interviewed, as a gesture of appreciation for his or her time (which my academic committee had suggested). However, the NGO did not want me to give anything to local residents directly on account of setting a precedent for community involvement in surveys, asking me to give money to the organization instead, which they said would go into a program fund for the community. I did not have a problem with the money going back to the community through some future program, if it were to be utilized that way, except that that was not my original intention. But since I had volunteered to give compensation to the community, I felt that I could not rescind my offer and, consequently, I gave the NGO a per capita premium for my research. Another monetary issue had to do with payment of my two field assistants. As my assistants were not employees of the NGO, I would have preferred to pay them directly (to ensure they got paid and that there was no delay). The NGO, though, wanted to have control, so we worked out an arrangement whereby they paid my assistants and I paid the organization. This would have been fine, except that due to their bookkeeping errors they overpaid one of my assistants and the other one had to wait for months to receive her final pay, long after I had paid the NGO and departed for Canada.

Most of my interaction with the NGO, though, was with the PLUS Project staff who worked out of the small office in the study community which I used as my research base. The PLUS staff was generally helpful and good about providing advice when I sought it and, on the whole, I had a decent working relationship with them. One episode, though, caused strained relations between several of the PLUS staff and me, which, fortunately, was short-

lived. The problem happened early on in my research when one of the project staff told me he thought I needed a bodyguard in the community, after which I contacted the director of the organization to express my security concerns. Though I did not volunteer the staffperson's name in my conversation with the director, his identity came out later and led to a reprimand from management for "scaring me." Some hard feelings ensued but the affected staffperson and I were able to talk them out and things smoothed over in time.

That incident aside, I did sense in general that the project staff may have felt that I was evaluating them and their work, or that I might talk to management about them, though I explained to them that that was not the purpose of my research. In spite of a few issues, though, I was grateful to the NGO for permitting me to do my research in the study community, without which I could not have carried out the fieldwork.

Beyond the actual research in the study community, a daily trial was simply getting around Delhi – to get to Sultanpuri in west Delhi, meetings with my NGO affiliates or key informants, libraries, and so on. As several colleagues in Delhi advised me to avoid taking public buses (because of theft on board and reckless driving), I traveled mostly by auto-rickshaw (the small, motorized, three-wheeled vehicles that are common in south Asia).[1] Travelling around Delhi was a challenge as the city is very spread-out and the level of traffic congestion is incredible in many places. Over the past decade, congestion in Delhi has steadily worsened with the burgeoning numbers of vehicles on city streets. The situation, moreover, was actually worse than normal during the period when I did my fieldwork, owing to construction of a massive metro (subway) project that resulted in gridlock in many parts of the metropolis.

My lack of Hindi was a liability, too, as far as communicating directions or negotiating rates with the *auto-wallahs* (rickshaw drivers). Invariably, the auto-wallahs would not use their electronic meters with me (they were always "broken") and I was over-charged at flat rates. While this was annoying at times, I realized, of course, that most of the drivers probably lived in the types of low-income settlements that were the focus of my research and, therefore, I did not bargain too hard. Apart from fixing the price, riding around Delhi in an auto-rickshaw was truly a hair-raising adventure at times. As someone accustomed to Toronto traffic norms, the rules of the road and use of space were obviously very different on Delhi streets. I was in three

[1] Taxis are also common in Delhi, though I seldom used them because the cost was about double the auto-rickshaws.

traffic-related accidents. One mishap occurred while I was walking along a busy street and was bumped by an auto-rickshaw. In the other two incidents, I was a passenger in auto-rickshaws that were side-swiped by cars in Delhi's crazy roundabouts. A few unsettling experiences aside, I was nonetheless grateful to the Delhi auto-wallahs for taking me to countless places around the city and for their unknowing assistance with my fieldwork.

Neither did I feel very safe in Paharganj, the area where I lived most of the time while in Delhi. Though I stayed in Paharganj mainly on account of the cheap hotel rates and availability of services, Delhiites warned me that the area was unsafe (e.g., robberies, drugs, and various scams directed at tourists). I was cautioned about going out after dark, especially, so did not venture far from my hotel in the evenings. Indian colleagues told me you are not completely secure even in your hotel room, as people on the street can follow you and bribe hotel staff to enter your room. Nonetheless, I did not have any problems there. Even though I am an experienced traveler, I basically felt unsafe most of the time in Delhi, except when I was with friends and colleagues.

Problems Related to Specific Research Methods

Regarding the three purposive surveys, the environmental committee members survey went well, while the community leaders and local stakeholders interviews had some minor difficulties. In the community leader interviews, I had concerns about the quality or genuineness of some data obtained from the pradhans and local councillor. In several interviews, I was of the opinion that individuals were holding back in their responses to certain questions, putting on a good front, or else exaggerating their leadership efforts and accomplishments in the community. When posed a series of questions about their work as community leaders, a number of the pradhans stated, for instance, that they acted on behalf of everyone in their neighbourhood, that they met with residents regularly, and that they dealt with all kinds of problems, which seemed to me rather pat answers. When asked to identify the most serious problems in their community, moreover, I think that a few leaders, who may have been actively involved in criminal activity or, at least, well aware of it in their community, were guarded in their responses. One other small problem was that a few of the local leaders were difficult to meet with because they worked outside the community during the day.

With the stakeholders survey, the main problem I had was the uneven quality of interviews. A few of the sessions were good, with respondents being very open and talkative,

while other interviews were less successful, probably owing to various factors. With the interviews with government officials, for example, I felt that several respondents provided glib answers or tended to put on a good front, not wanting to stick their necks out or convey an unfavourable impression of themselves or their departments. Similar to interviews with some of the community residents, moreover, the physical context (i.e., whether co-workers were in the vicinity) seemed to influence the candour of government respondents. As a case in point, the worst interview in the survey was the one with a senior bureaucrat from the Horticulture Dept. who, after the first question or two, was promptly joined by approximately ten of his colleagues who sat around his office to observe! The rest of the interview was a write-off. Furthermore, a couple of the senior government bureaucrats, though they had apparently been key decision-makers in the PLUS Project a year or two earlier, did not seem to have much recollection of the community or their actual involvement. The interviews with my affiliate NGO I would rate as only fair, primarily because the staff with whom I met also held back in their responses. I sensed a certain reticence on their part, for instance, to disclose the trials and tribulations related to their work in the community, perhaps out of concern that their efforts might not be viewed in a positive light. Despite explaining to the NGO respondents that my research was not an evaluation of them personally, the PLUS Project or the organization, I was not able to completely overcome this reserve.

Another difficulty with the stakeholders survey was simply gaining access to specific individuals, which meant that I was not able to interview everyone I had hoped for. Numerous government officials who had been involved with the PLUS Project had been transferred elsewhere and could not be traced, while a few had retired. The consultant who had designed Hazari Park, one of the major initiatives under the PLUS Project, was not to be found and my NGO affiliate had no contact information. An interview that I arranged with the local MLA (Member of the Legislative Assembly), who was a powerful stakeholder in the PLUS Project, unfortunately fell through when my assistant had an urgent family matter, after which the fellow was out of Delhi for several weeks and I lost my chance.

With respect to my document and literature search in Delhi, I would have to concede that I not able to obtain everything that I wanted, partly on account of access restrictions and partly because much of what I was looking for was in short supply or did not exist. For instance, I was able to obtain some but not all of the community-level documentation on the PLUS Project from my NGO affiliate. The organization was reluctant in the early stages to share their

internal documents and reports with me and it was only towards the end of my fieldwork, after repeated requests, when I managed to obtain a portion of it. The PLUS documents I did get a hold of have a lot of useful information, though some are incomplete or undated. As for my macro-level literature search in Delhi, I found that while much has been written about slums and urban poverty in India, as well as the urban environment at a city scale, comparatively little academic work has been done on the environmental aspects of low-income urban settlements. Moreover, considerable research has been carried out on participatory forms of management in the rural context, yet the literature is not extensive on community-based approaches to environmental management in Delhi and other Indian cities. Furthermore, the literature on social capital in the Indian context is quite limited. As far as government documents, I did find a number of publications from the various government bodies, but was not able to access reports from key local government departments such as the MCD Slum and JJ Wing, Public Works and the Delhi Jal Board.

The "Broken Window" Thesis

According to the theory, the "broken windows," whether physical or behavioural, make people think that anti-social acts or crime in the area is increasing which, on account of fear, causes them to interact less with others and, as a result, informal social controls (i.e., norms and sanctions) are weakened. The decline of pro-social norms is deemed particularly consequential for youth. Although not predestined, the weakening of informal social controls facilitates, in turn, the evolution from milder forms of anti-social behaviour and delinquency to more serious acts of crime and violence (Wilson and Kelling, 1982; Villarreal and Silva, 2006). Of course, the application of the "broken window" theory to Sultanpuri is only speculatory on my part; I do not have cause-and-effect data that might corroborate the thesis. Nevertheless, I present the "broken window" argument as a plausible explanation of how the effects of vandalism in the study area go beyond the actual physical damage to community amenities.

Photographs of Sultanpuri

Fig. 1 (Left): *Private water connection (in left foreground) at a house in the resettlement area of the study community. The majority of resettlement colony households have individual connections to municipal water from the Delhi Jal Board (DJB), though supply tends to be intermittent and unreliable. Hydrants are usually located outside dwellings, at a height of one to two feet above grade, with residents sometimes using a length of plastic hose to fill their vessels.*

Fig. 2 (Below): *Public standpost in the squatter area of the study community. As the squatter households do not have private water connections, they rely instead on community facilities such as these, one of four such standposts in their colony. Similar to the resettlement area, water supply is often a problem.*

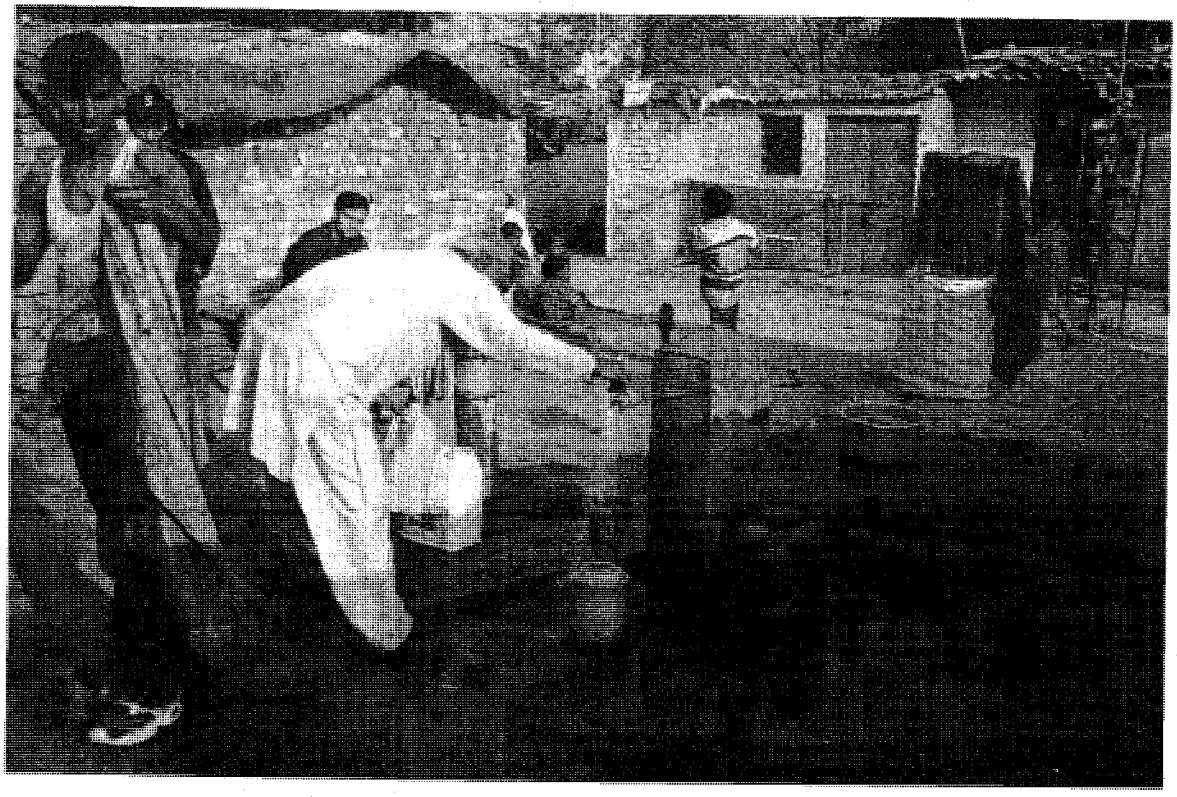
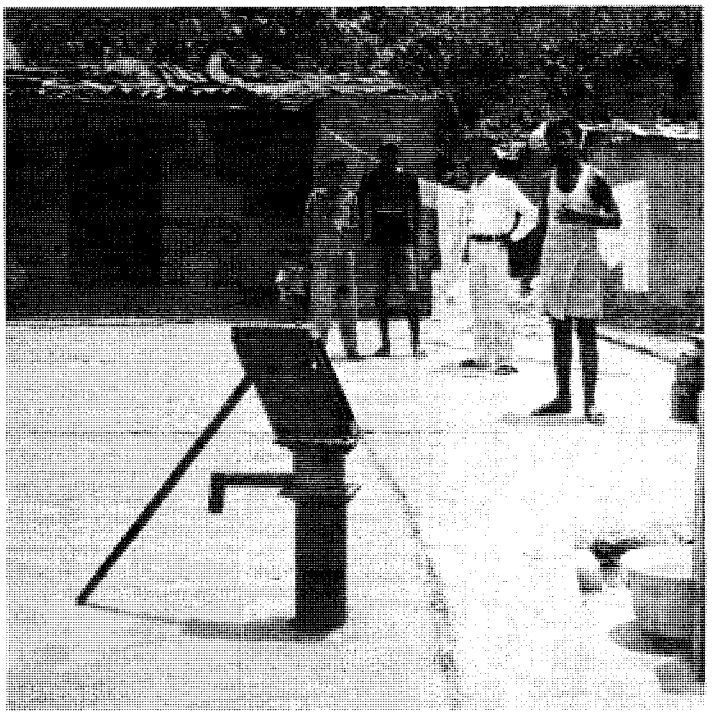


Fig. 3 (Right): *Community pump in the squatter settlement. Though groundwater in Delhi is not suitable for potable use, many households in the study community utilize this source of water for non-potable uses such as bathing, housecleaning and washing clothes.*



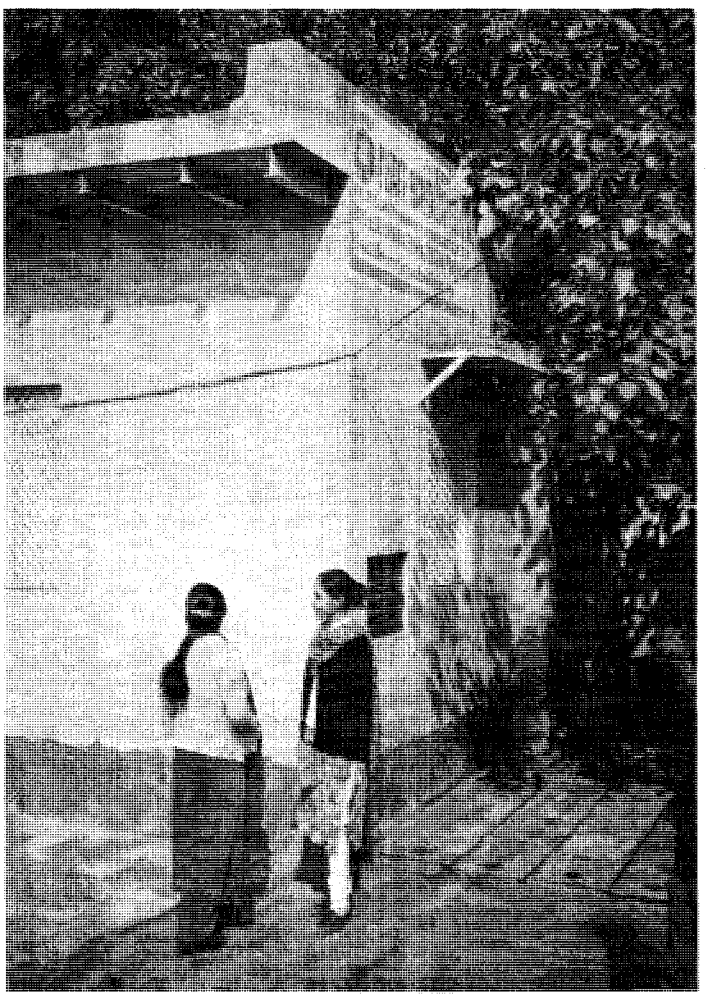
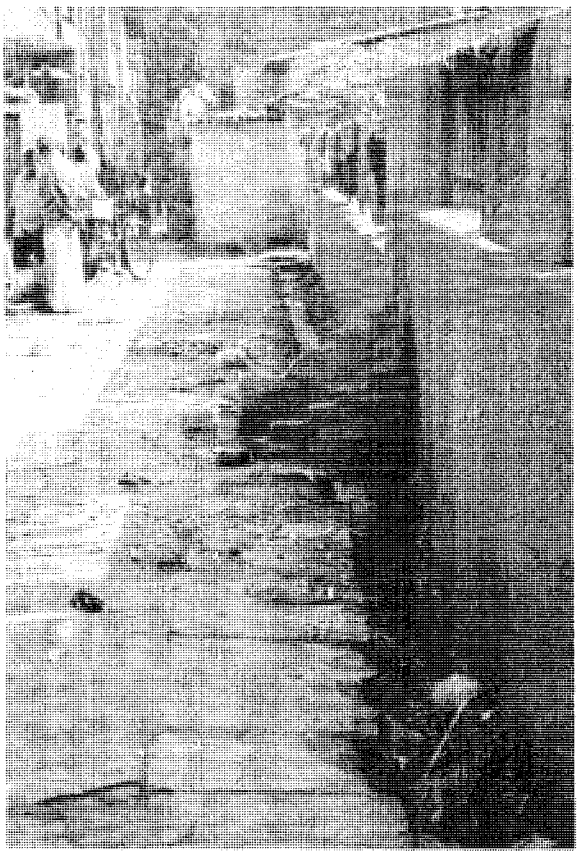


Fig. 4 (Left): *Local community centre in the study area also doubles as a rainwater harvesting structure, with the rooftop and paved surfaces of the property designed to promote groundwater recharge. Rainwater is funneled to the side of the building, where it infiltrates into a borewell (underneath the stone slabs in the right foreground). As water tables in the city continue to fall year after year, rainwater harvesting structures are becoming increasingly widespread in Delhi. Nonetheless, adoption in low-income settlements in the city is a rarity.*



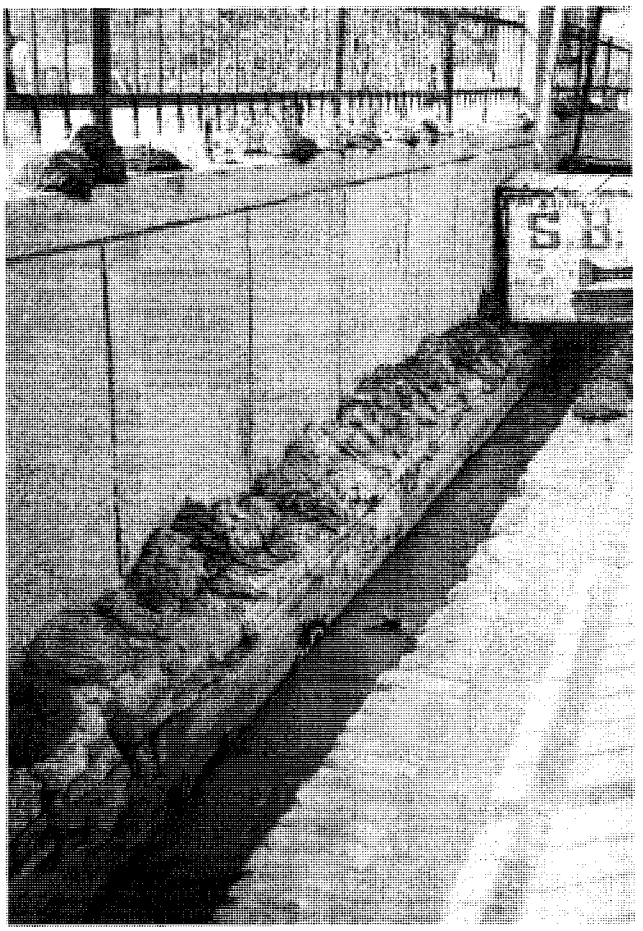
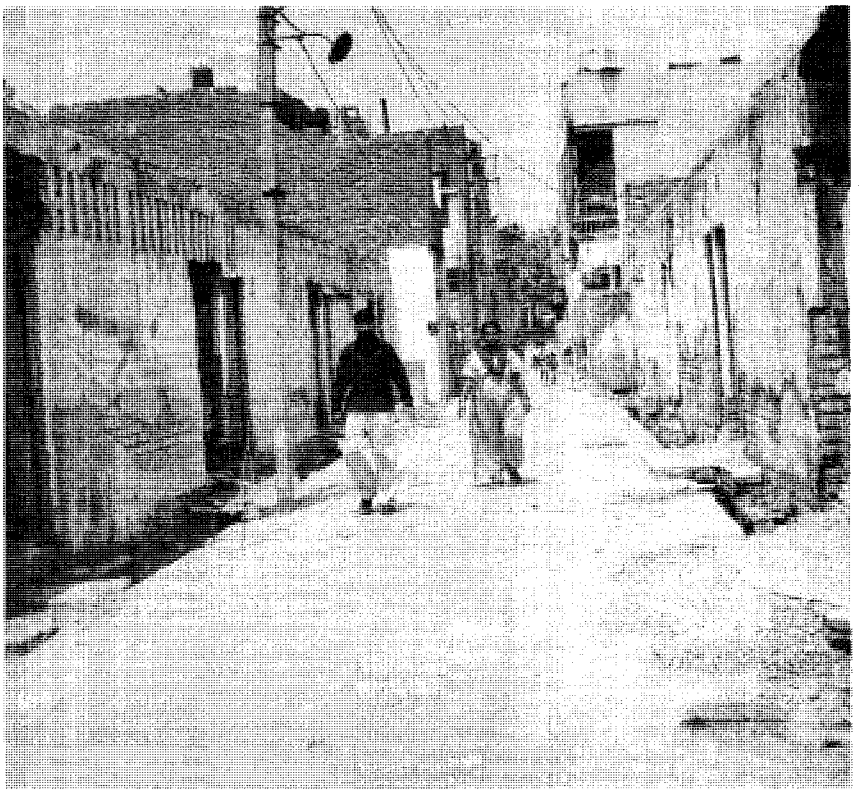


Fig. 5 (Above): *Small open drain (nali), about one foot wide, next to boundary wall of park in the resettlement area of the community. Plastic bags, along with other types of solid waste, clog up the drainage system, resulting in stagnant water and flooding.*

Fig. 6 (Above right): *Larger open drain (nallah), about two feet across, also beside the park, shown with buffalo dung drying against park wall.*

Fig. 7 (Right): *Open drains in front of abandoned houses in the resettlement area, covered with stone slabs in front of doors.*



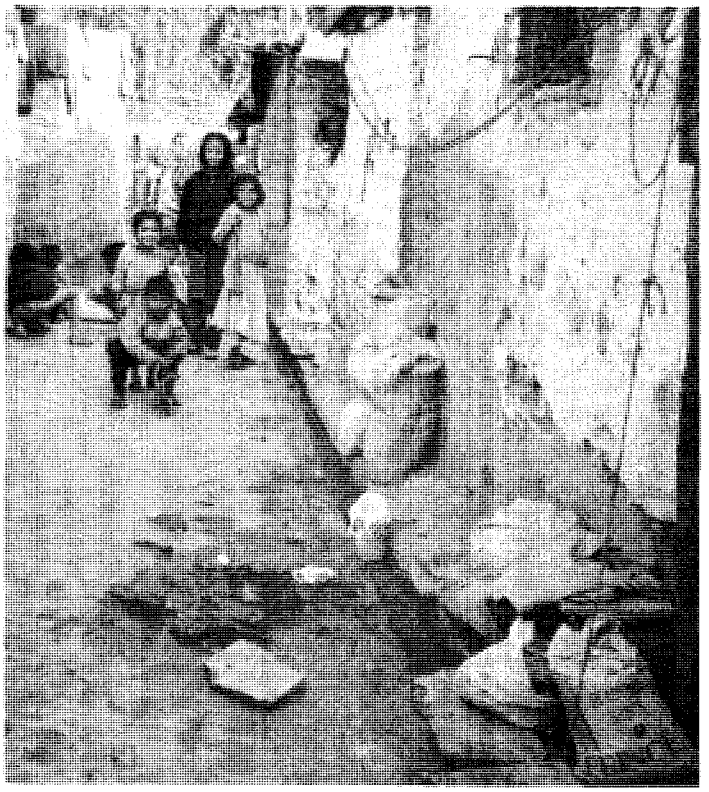


Fig. 8 (Left): *Open drains in the squatter settlement, where local drainage was improved with the addition of permanent drains in front of houses and paving of common areas in 2001. Before that time, squatter households constructed trenches around their dwellings.*

Fig. 9 (Below): *Another view of drains and paving in the squatter settlement.*

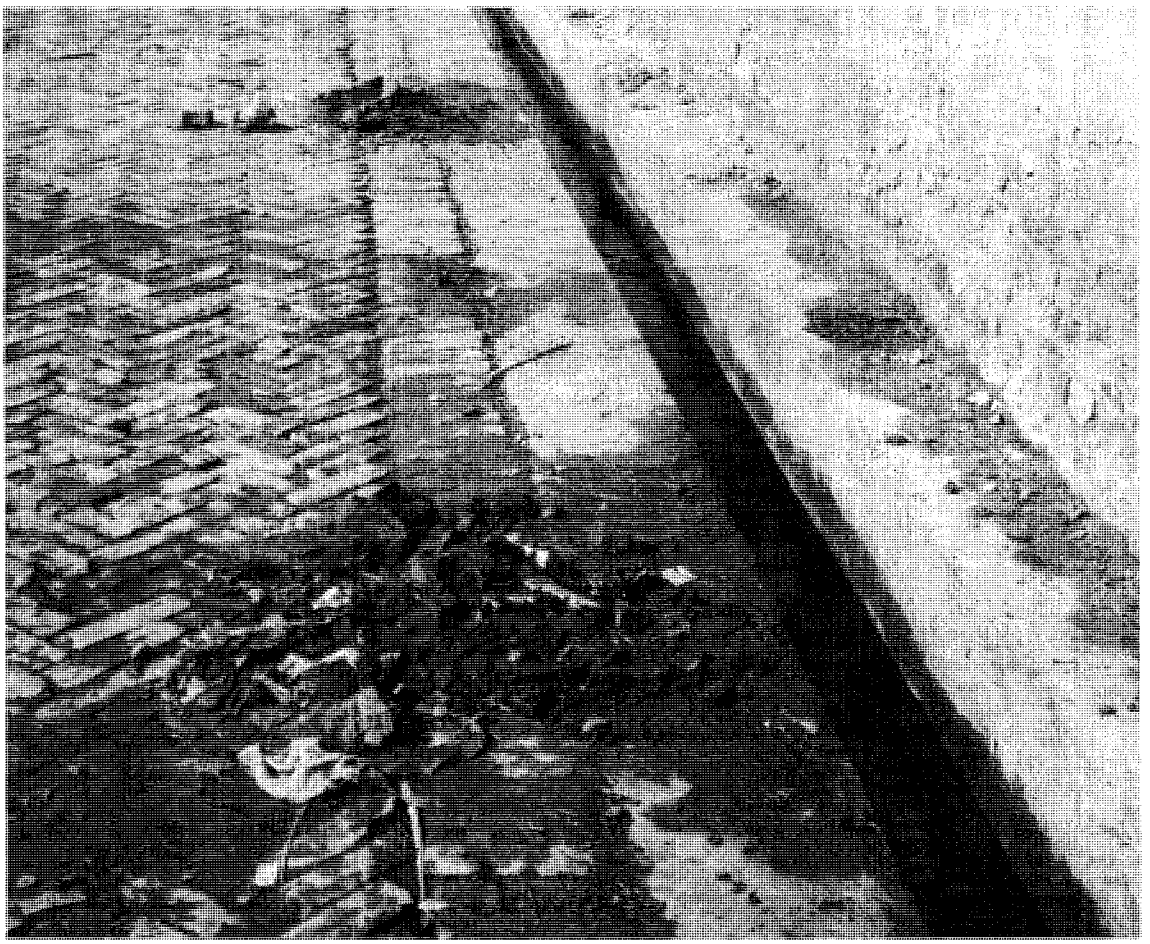


Fig. 10 (Top): *Cleaning of community drains is a two-stage, manual process carried out by Delhi government workers from the Cleaning and Sanitation Department. In the first stage, the black muck is scooped out of drains and left on the pavement to dry.*

Fig. 11 (Bottom): *In the second stage, workers pick up the muck, deposit it in push-carts, and transport the waste to the nearest garbage collection point. According to local residents in the study community, the muck can lie uncollected for days or weeks before it is carted away.*

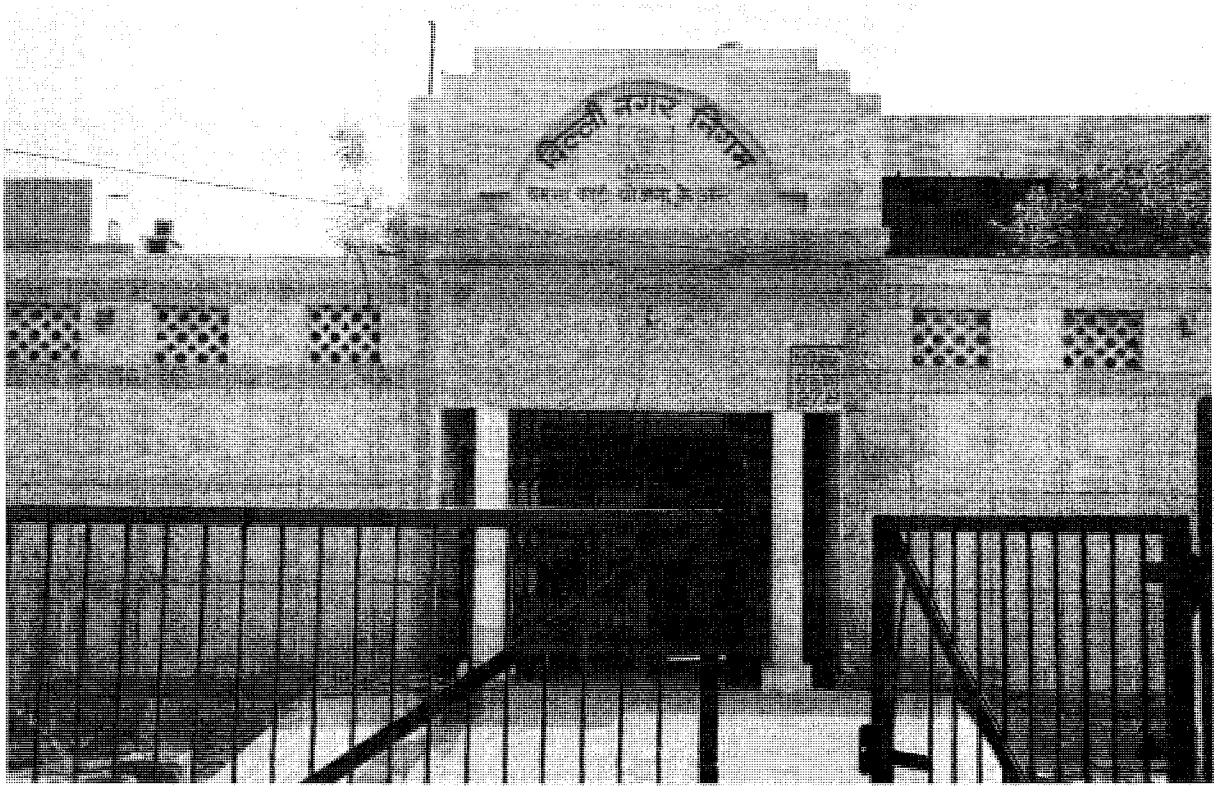


Fig. 12 (Above): *Community toilet block, built in 2001 by the Japan Aid Agency.*
Figs. 13 and 14 (Bottom): *Many residents have built permanent structures over drains in front of their houses.*

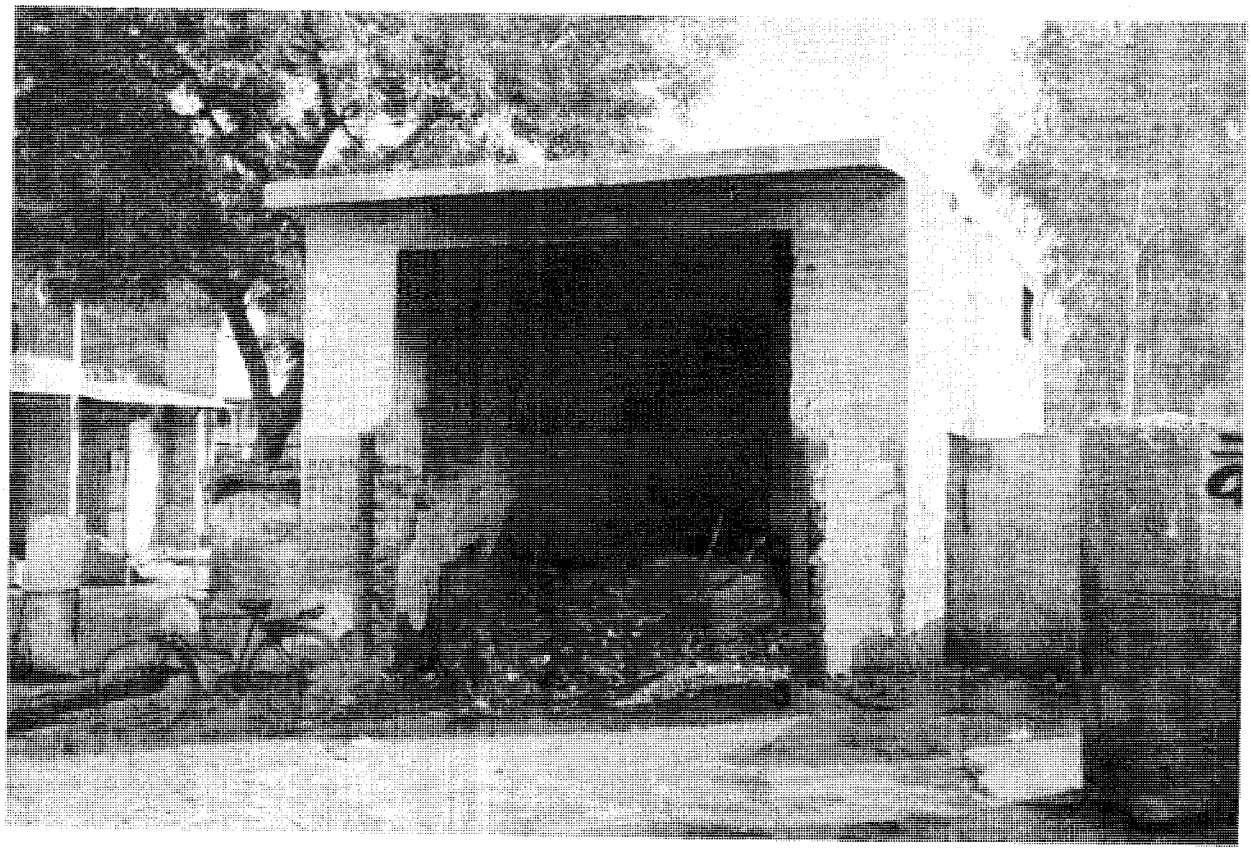


Fig. 15 (Above): *Dhalao (garbage collection facility) at the north end of Hazari Park in the middle of the study community. Residents in the vicinity bring their garbage here, or else pay private sector waste collectors or government workers for household pick-up service. When the dhalao was constructed in 2001, nearby residents (note houses in the left of the picture), were very unhappy – a case of "Not In My Backyard" (NIMBY).*

Fig. 16 (Left): *Composting pits next to the dhalao, for reducing the organic fraction of the community's waste stream. The woman, a local resident, is recording the compost levels in the various pits. The composting facility, which has eight pits in total, was also built in 2001.*

Fig. 17 (Right): *Private sector waste workers at the dhalao, sorting through garbage for recoverable materials. Among the saleable materials, plastic is the most valuable. To the right of the dhalao, inside the walled enclosure, is the community composting facility.*

Fig. 18 (Below): *Workers use bicycle carts, as shown in the picture, to transport salvageable materials to waste dealers. Animals, including cows, pigs and dogs, were a regular sight at the dhalao, reducing organic waste but also spreading materials around in the area.*

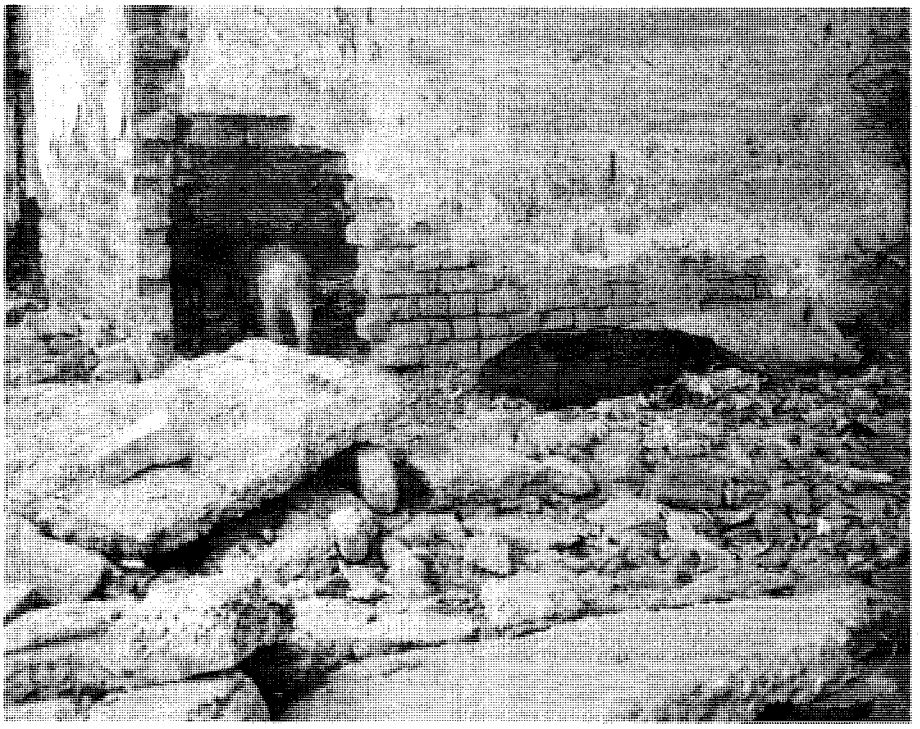


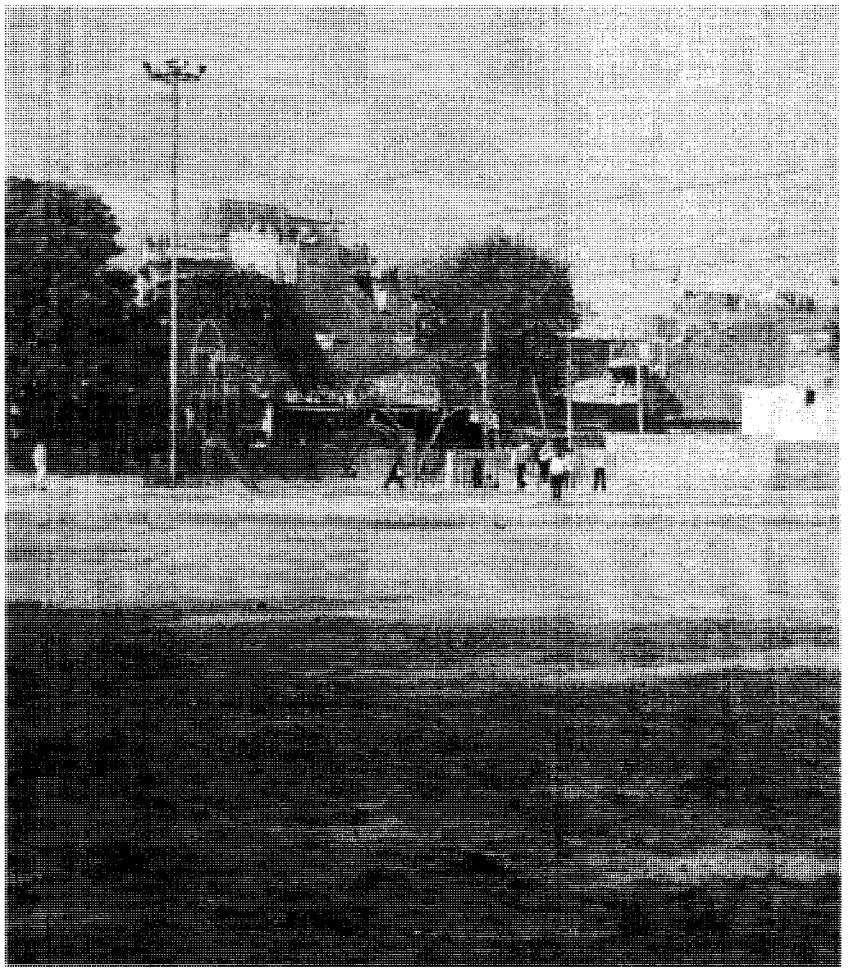
Fig. 19 (Above): *Open dump in the vicinity of the study community.*

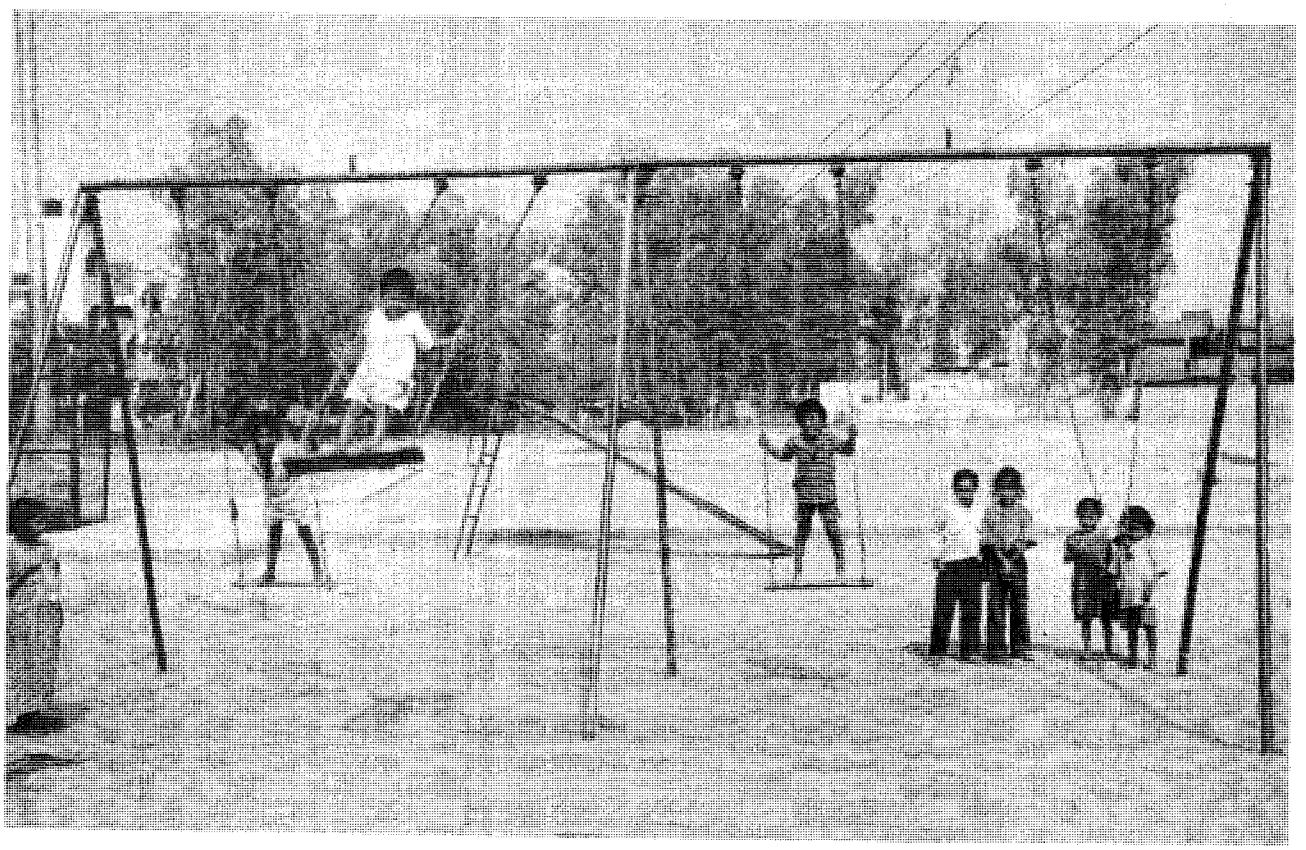
Fig. 20 (Left): *Garbage dumping inside abandoned houses.*

Fig. 21 (Right): *Hazari Park, at approximately one hectare in size, is the largest open space in the study community. The park is flat and devoid of greenery, except in places around the perimeter. The raised walkway system that traverses the park is evident in the picture's mid-ground.*

Fig. 22 (Bottom right): *Trees along the park's boundary wall.*

Fig. 23 (Bottom left): *Plant nursery at the south end of Hazari Park, operated by the Delhi Government's Horticulture Department.*





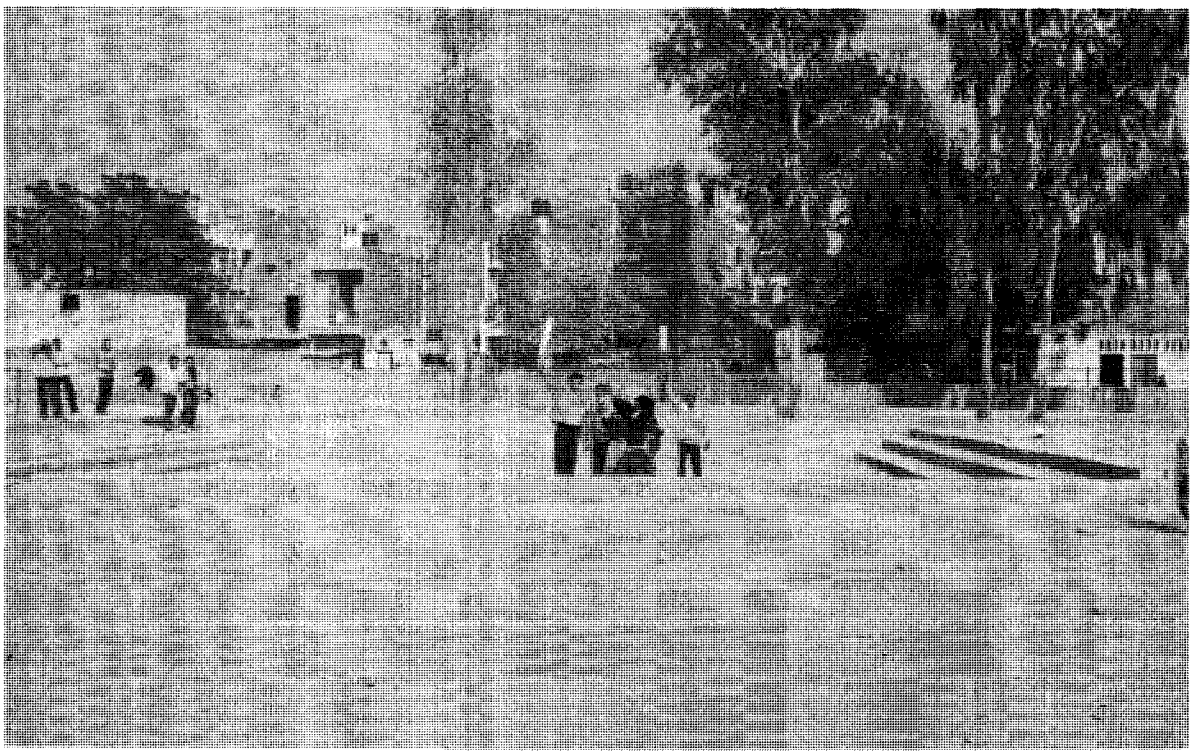


Fig. 24 (Top): *Playground area, at north end of Hazari Park*

Fig. 25 (Bottom): *Outdoor amphitheatre, Hazari Park*

Fig. 26 (Above): *At almost any time of day in Hazari Park, a cricket game is taking place. Here, children are grouped around a wicket they have made out of bricks taken from the walkways.*

Fig. 27 (Left): *Walkway in Hazari Park, showing bricks that have been removed since the infrastructure was built in 2001.*

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