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Planning for Health in the Resettlement Colonies of Delhi, India

By

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In modern day Delhi, India, much research has been conducted on understanding the past and present of urban planning as well as the epidemological profile of Delhi, however, there is a significant gap in research focused on understanding the steps of the planning process and how they can improve public health. In this thesis I explore the use of the rational planning model and its use in the development of resttlement colonies in New Delhi, and use case studies from resttlement colonies to provide examples of how the model's shortcomings have led to health disparities in the colonies. My research concludes that each step of the Rational Planning models, as applied in Delhi, has opportunity to cause or enhance public health threats when used to plan resttelment colonies, and future slum relocation programs would benefit from alternative planning theories.

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I. Introduction

Anyone that visits the City of New Delhi will be astounded by the rich history, vibrant culture, and diversity of the population. However, one also might be shocked by the contrasts found within the city limits: lush parks juxtaposed against factories billowing smoke, a new metro system above streets filled with bicycle rickshaws, and slum populations living in the shadows of houses rivaling the splendor of the Taj Mahal. Delhi is a changing city and this juxtaposition results from a growing economy and increasing urban population. As the city grows, the need for adequate urban planning takes on added significance, especially in order to accommodate for the growing slum populations. Starting in 1958 the Delhi government began to take steps to relocate and/or improve the lives of select slum populations. These efforts included implementation of resettlement policies. The policies put in place affect the lives of those involved in many ways, including their health and physical wellbeing.

In this thesis the author will first examine the planning model used in Delhi as well as the current state of public health. After establishing context, the application of the Rational Planning Model, and the ways its applicatons contributes to the decline of public health will be assessed using Delhi Resettlement Colonies as a case study.

II. Literature Review

i. Rational Planning Model

The planning process used in urban and regional planning is not linear and surveys of different countries and cities reveals diverse approaches to planning based on the unique context of each area. However, the rational planning model, or as alternately referred to as the comprehensive planning model or comprehensive rational model, is one of the most widely used and accepted approaches to urban and regional planning. This model involves using goals and objectives in the creation of a development plan rather than "simplistic land use zoning" common among its predecessors (Greed, 2000: 116). The rational planning process may be applied to an overarching urban plan or a single piece within a larger plan such as low-income housing development. The basic form that the rational approach brings to planning takes is outlined in the following steps:

1. Identify issues and options
2. State goals and objectives; identify priorities
3. Collect and interpret data and information (analysis)
    a) gathering of basic information
    b) visual survey
    c) identification of hard and soft areas
    d) functional analysis
4. Prepare plans
5. Draft plan for implementation
6. Evaluate potential impacts of plans and implementing programs

7. Review and adopt plans

8. Review and adopt implementation programs

9. Administer plan-implementing programs, monitor their impacts, and amend plans in response to feedback

The beginnings of the rational planning model can be traced back to "the father of sociology" August Comte, who lived from 1798-1857, and believed that "persistent social problems might be solved by the application of certain hierarchical rules" (Mäntysalo, 2005: 1). The ideas and theories of Comte are present in the central assumptions of the rational planning model that became widely used in the 1950s and 1960s (ibid).

There are a number of central assumptions underlying the rational planning model. The first is that through empirical science that we can objectively come to know the state of the world. The second is that we can apply these empirical practices to humans and their interactions with the world around them, thus, with the rational planning model, the planning process becomes a scientific and technical process (Kinyashi, 2006: 7). A problem is identified, an assessment and analysis of all alternatives will be conducted, and a course of action selected and then carried out. Loops exist to allow for feedback for necessary corrections in the planning process. Proponents of the rational planning model believe that through development of comprehensive analysis of the issues at hand a better plan can be developed (Mäntysalo, 2005: 2). Another central assumption is that change must be engineered from the top, or in other words, that for this model to work top-down planning must occur (Fainstein and Fainstein ,1996). This central

assumption also interplays with the assumption that there is a common public interest, which those at the top and those at the bottom share (ibid).

While the Rational Planning model still remains one of the most widely accepted and used planning models, it has faced an incredible amount of criticism in recent decades. The criticism falls into two main categories: 1) the model is political in nature and can be misused 2) there is no way to gather truly comprehensive information.

The biggest challenge to the rational planning model is that it can be manipulated to favor the interests of the powerful and neglect the interests of those without power despite the fact that they are still stakeholders in the planning process. There exists an inherent social order in the rational planning model: "elected officials set goals; with the help of experts they identify problems; experts generate alternatives; experts then evaluate these and reach conclusions about the efficacy; decision makers, on the basis of their information decided on policies and actions; and bureaucrats implement these" (Innes and Booher , 2010: 18). In theory the experts who are selected to carry out the goals of the elected officials are rational agents of a technical process. These rational agents are to objectively operate off of data collection. However, assuming they can maintain objectivity, the influence of the social environment on the planning process stands as one of the inherent flaws of rational planning theory. Furthermore, research conducted by Rein and White demonstrated that even when extensive analyses of policies are conducted neither politicians or experts involved in the planning and policy process use the data in making planning and policy decisions (Rein and

White, 1977: 244-50). Even more interestingly when experts or politicians "hire outside consultants, they do so typically from firms with known methods and orientations that will produce fairly predictable results (Innes and Booher, 2010: 18-19).

Along with being criticized for its potential for power abuse, the rational planning model also faces criticism for its top-down planning approach. The structure of the rational planning model places decisions in the hands of those at the top and then the consequences of those decisions, good or bad, trickle down the ladder of power. In his publication *Seeing Like a State,* Scott summarizes the effects of allowing those in power to try to change our society:

> Where the utopian vision goes wrong is when it is held by ruling elites with no commitment to democracy or civil rights and who are therefore likely to use unbridled state power for its achievements. Where it goes brutally wrong is when the society subjected to such utopian experiments lacks the capacity to mount a determined resistance (Scott, 1998: 89).

Scott sums up the dangers of allotting power to a few and providing no means for it to be checked by those it impacts the most.

A more practical attack of the comprehensive rational model addresses the claims contained in its name. The comprehensive model claims to be precisely that: comprehensive, but to tackle the many issues that are covered in a comprehensive plan requires complete, and arguably perfect, information in order to develop all possible alternatives. Critics of the rational planning model argue the impossibility of developing "exhaustive alternative evaluations and complete information" (Luzzi,, 2001: 4). The information being gathered and selected for is limited by time and financial abilities, but in addition, is also limited by the

worldview and perspective of those collecting information and reviewing alternatives. To elaborate, many times the planners and politicians involved in the planning process have a distinct view of the world, and this view impacts the ways they choose interpret situations and information that come before them. For this reason, input from citizen groups on the outside of the process can contribute to accumulating comprehensive information. Even though citizen involvement is considered to be a component of the rational planning theory, in attempt to maintain a technical and objective process, citizen participation in the traditional policy analysis process is minimized precisely because citizens are considered to lack technical expertise and can be emotionally involved in issues of concern rather that being detached and rational (Kweit and Kweit, 1986: 22). Thus, while the rational planning process claims to be comprehensive flaws in the system itself hinder reaching this goal of complete information.

ii. Planning in Delhi

As one of the oldest cities in the world, Delhi has a rich history that one can observe through touring the city and noting the many varied styles of architecture present from the crumbling foundations of Indraprastha to the brand new exteriors of Select City Walk Mall. While evidence of planning has been present throughout the different time periods in Delhi, "modern Delhi's" planning really began in 1912 under the imperialism of the British (Shrey, Kandoi and Srivastava, 2011: 3). Modern planning in India can be broken into three time periods 1) Imperial British period from 1912-1935 2) Development of the Delhi Improvement

Trust from 1935-1950 3) Post-Independence period from 1950 onwards (Priya, 2012: 827).

In the first planning period, the British government decided that there would be a new capital city built, and that development of “New Delhi” would be under a team of British planners led by the architects Edwin Lutyens and Herbert Baker (Ibid 824). European town planning at the time was very much focused on the idea of Garden Cities, cities that contained a large amount of open space located within the urban area. Lutyens and Baker’s goal was to develop New Delhi into a Garden City; a development in urban planning that would ultimately lead to a significant health issues for the people of Old Delhi (Shrey, Kandoi and Srivastava, 2011: 10). To obtain the land needed to construct Lutyen’s New Delhi, citizens needed to be relocated and Old Delhi saw a 26% increase in its population straining the already buckling infrastructure and limited resources (Ibid). What the city of Delhi needed was not beautification; it was revitalization and a plan for sustainability.

The declining public health of Old Delhi then led to the second phase of modern planning. This phase focused on controlling building operations and regulating land usage. The most important development during this period was the birth of the Delhi Improvement Trust (DIT) in 1937. The Trust was a body with “statutory authority” responsible for “’dealing with the problems of slum clearance’ whose growth was increasing impacting the rest of the urban area” (Priya, 2012: 825). However, the success of the DIT, over the decade it was active,

proved dismal at best, and can be summarized as having: “an absence of vision in city development and a marked pro-affluent bias” (Ibid 826).

The final phase of planning includes the Post-Independence period, which began in 1950 with the establishment of the Delhi Development Authority (“DDA”). To date, this Authority still holds the position as New Delhi’s largest planning body. Its functions are explained in greater detail below. The Municipal Planning Corporation of Delhi works in conjunction with and sometimes takes over the duties of the DDA:

The DDA is credited as the first urban development authority in India. It was formed in 1957. The DDA, an independent body, reports to the Government of India’s Ministry of Urban Development. The planning wing of this body prepares the Master Plan and zonal plans for areas of planned development in Delhi (Narula, 2009: 148). In order to develop a Master Plan and zonal plans, the DDA examines the housing need and proposes a housing strategy. Part of this housing strategy includes some programs for the improvement and development of housing for the urban poor (Ibid149).

The Municipal Corporation of Delhi (“MCD”) was established the same year as the DDA under the Municipal Corporation Act of 1957 (Lok Sabha, 2011). The MCD is among the largest municipal bodies in the world, providing services to more than 11 million citizens in the capital of India, and has the distinction of providing major civil services to rural and urban villages, resettlement colonies, regularized unauthorized colonies, and slum squatter settlements (P. Singh, 2009: 145). Under the Act of 1957, the MCD also has a number of responsibilities for the

provision of sanitation and public health. This means that when it is developing resettlement colonies, the MCD must meet basic requirements laid out in the Act of 1957's legislation. Additionally, over the last thirty years the MCD has inherited authority over the slum clearance schemes taking place in the city of Delhi.

iii. Epidemiological Profile and Public Health in India

Epidemiological data can explain a lot about the health status in a country, and "understanding of the epidemiological profile is an essential pre-requisite to assess and address public health needs in the country and to enable efficient program planning and management" (Gupte, Ramachandran, and Mutatkar, 2001: 437). An effective way to summarize the epidemiological profile is through using the Disability Adjusted Life Years. The World Health Organization uses Disability Adjusted Life Years (DALY) to measure lost years of life due to premature death and disability, and in general can be consider "years lost of healthy life" (World Health Organization , 2013). For perspective, the average world DALY losses are 41% due to communicable disease, 43% non-communicable disease and 16% due to injuries. India has the second highest DALY losses behind Africa with 50% of losses due to communicable diseases, 33% due to non-communicable disease, and 17% for injuries (Gupte et al., 2001: 438). Some of the most prevalent communicable diseases include parasitic and infectious diseases, such as malaria, cholera, dengue fever, and tuberculosis; respiratory infections; diarrheal disease; and childhood diseases such as chickenpox, meningitis and measles (Ibid).

Additionally, new public health issues have also began to plague India's urban centers. These issues, including obesity, diabetes, hypertension, and heart disease, are more generally considered western public health concerns. This shift reflects the every changing and increasing need for public health programs. More importantly, these new public health concerns predominantly affect the urban and wealthy populations rather than the rural and poor populations; an estimated 20-25% of the urban population suffers from hypertension as opposed to 8-13% of the rural population. However, even though new health issues have cropped up in the city of Delhi, the greatest concern still remains on that of communicable disease with its unrelenting presence, especially among disadvantaged populations.

Over the last few decades the poor state of urban public health in Delhi has become a widely researched topic, and has garnered attention from scholars and government bodies. Much of the blame for the public health conditions falls on the rapid urbanization of the city. The Ministry of Urban Health and Welfare has addressed this concern as follows: "The key problems relate to the rapid increased in the population of slum dwellers which outstrips the meager resources and services which exist, lack of convergence and coordination of efforts from among various programs and stakeholders and lack of linkages with the community"; the city of Delhi is growing too fast to keep up with the needs of its people (State of Urban Health in Delhi, 2003: xi). The main reason for this increase in urban population arises from a decrease in rural employment and the increased promise of employment within the city of Delhi. A portion of the increased populations in

urban areas can also be attributed to immigrant migration as well (Shrey, Kandoi and Srivastava, 2011: 5). As the urban population increases, it strains the existing infrastructure, most particularly in areas of transportation, water supply, sanitation, health services, and housing. These stressors occur on top of the infrastructure strain Indian urban centers already face, and the burden of limited resources and public services falls on the back of the urban poor; citizens living in slums will face even more competition for the limited water allotted to each hosing development, and find themselves competing for the already too scare public facilities.

Understanding the need for public health improvement, the Government of India has launched a number of different health initiatives including the Jawaharlal Nehru National Urban Renewal Mission in December of 2005. The JNNURM "focuses on an integrated approach to provide basic services to the urban poor in 63 identified cities in the country including Delhi" (State of Urban Health in Delhi, 2003: 5). A second initiative that works in conjunction with the JNNURM is the National Urban Health Mission (NUHM). The stated goal of this mission is to "meet health needs of the urban poor, particularly the slum dwellers by making available to them essential primary health care services. This will be done by investing in high-caliber health professionals, appropriate technology, and health insurance for urban poor" (Urban Health Resource Center, 2013). These initiatives launched to improve the health of the urban poor incorporate government involvement at both the local, state, and national level with responsibilities distributed between governments. The hope is, with the combined efforts of the local and national

public health sectors, Delhi and the country of India as a whole will see a vast improvement in the state of public health.

iv. The Links Between Planning and Public Health

The germ theory states: "specific microscopic organisms are the cause of specific diseases" (Tomes, 2013: 13). This theory, practiced widely throughout the 18th and 19th centuries, reduced disease to simple interactions between microorganisms and a host "without the need for elaborate attention to environmental influences, diet, climate ventilation and so on," and thus revolutionized understanding the cause of disease but not necessarily its treatment (Tomes 16). It has become clear that ensuring the health of communities and populations requires moving beyond the simplicity of the germ theory of disease in order to understand public health from a holistic perspective (Centers for Disease Control and Prevention, 2010: 1). This means acknowledging that factors such as "housing conditions, social networks, social support, poverty, unequal access to health care, incarceration, lack of education, stigmatization, homophobia, and racism are key drivers" for disease (Ibid 3). These factors also determine the rate of disease in a community and often can explain health disparities between populations. Because so many factors contribute to health, "health status should be a concern for policy makers in every sector not just solely those involved in health policy" (Marmot, 2005: 365). Concern for health in the planning sector should be no exception.

In many cities and countries around the world those involved in city development and planning have began using an interdisciplinary approach, which recognizes the ways urban planning can contribute to public health. An interdisciplinary approach to planning is not a relatively new phenomenon, in fact it surfaced in Britain during the Industrial Revolution when the populace became acutely aware of the health burden poor planning and failure to keep up with urbanization had created. Planning in essence became a result of the need to confront public health issues (Vargas, Garces, and Rouse, 2012). Then, in 1876, Benjamin Ward Richardson published his work *Hygeia: A City of Health*, which was his vision of a model city with limited if not absent of disease. "Richardson's conviction of the importance of environmental factors in disease led him consistently to oppose Pasteur's germ theory, rather emphasizing cleanliness and preventive medicine" (Wallis, 2004). Meanwhile in the United States, the Parks Movement started by Fredrick Law Olmstead and The Settlement House Movement by Jane Adams, were taking place (Varags et. al, 2012). Through the Parks Movement Olmstead pushed for the increasing the number of parks in urban spaces, as urban space would improve health conditions of overcrowded cities. Through Hull House Adams sought to improve the social health of communities (Jordan, 1994: 90).

In the 20th century planning diverged from its original public health, social, and environmental concerns to focus more exclusively on concerns of "efficiency and scientific management" (Vargas et. al, 2012). During this time period zoning

became the major tool for developing and implementing planning, leading to planning with limited consideration of context in which planning is taking place.

Today in developed western societies, like the United States, the link between planning and public health has come full circle, and the linking of the two disciplines has become ever more important to confront issues of chronic disease such as diabetes and obesity as well as issues such as livability and public safety. However, in developing nations, like India, the union between public health and planning still seeks to tackle the ever-present issue of communicable disease, along with new "western" public health threats.

v. Planning and Public Health in Delhi: Research Contribution

The social determinants theory to health stresses the need to intertwine the urban planning process with the public health sector, something that has been poorly implemented in the New Delhi area. Failure to link the health and planning sectors has increasingly led to adverse health outcomes over time. Presently many scholars are focused on illuminating the public health woes of economically disadvantaged populations in Delhi. While research exists on the history of planning in Delhi and the present approach to urban planning as well as public health programs in Delhi, there is a significant gap in research focused on understanding the steps of the planning process and how they can contribute to improvement of public health. This thesis will outline slum resettlement policy in then use public health cases from resettlement colonies in Delhi to critique the use

of the rational planning model and its application in the politically charged environment of Delhi.

III. Methodology

The Rational Planning Model is a goal-oriented planning process that consisting of successive steps connected by feedback loops. Presently, the planning bodies in Delhi follow a planning process that in theory resembles the rational approach to planning. The Planning Department of Delhi is responsible for preparation of a Five Year Plan which involved "(i) estimation of resources for financing of Annual Plans & Five Year Plan, (ii) preparation, monitoring and evaluation of Five Year Plan" (*Introduction*, 2013). Furthermore, each Five Year Plan contains a set of goals that influences the content of the plan. Based on the resemblance between Delhi's planning approach and the Rational Planning Model, Rational Planning theory will be used to guide my analysis of resettlement policy in Delhi. Each case study will be evaluated in terms of a theme or step of the planning process, as well as in terms of a larger understanding of the planning field.

This research utilizes data collection from three sources: literature review, interviews, and observations of historic photographic records in contrast with current site conditions. Prior to conducting fieldwork, a literature review was carried out to identify the existing and past policies that were put into place to address health concerns created by the forced resettlement of populations. The literature review includes government publications, newspaper articles,

publications from non-governmental organizations (NGOs"), as well as academic journals and books. Primary documents for review were obtained from the Centre de Humanities, National Council for Applied Economic Research, School of Planning and Architecture in Delhi, and the Delhi Development Authority Library as well from NGO sites such as the Hazard Centre and Habitat India. In the end these resources become the basis of research; interview questions were then built from their foundation.

Primary data was also collected during walking tours of various resettlement colonies in the New Delhi area. Sites were selected randomly. Differences between the various colonies were observed in conjunction with discussions of health issues found in past and current literature. Interviews were carried out in compliance with human research ethical constrains. Participants were alerted to the fact that their information would be used in research, and confidentiality was ensured for all participants if requested.

While the School of Social Sciences at Jawaharlal Nehru University provided the author a wealth of individuals with public health experience and knowledge, locating individuals with expertise in planning and public health proved to be difficult, a situation that perhaps is suggestive of a lack of unity between the experts in the field of public health and those in planning. Furthermore, the author had difficulty obtaining interviews with those in the Delhi Development Authority (DDA) and Municipal Corporation of Delhi (MCD) who have worked or currently work on issues of resettlement and resettlement policy. Upon meeting with an architect from the DDA the author learned why arranging meetings had been so

difficult: “I tried to locate someone who worked in the field that you are looking into, but there simply is not anyone who I believe would be of help” (Chaudhuri, Jana, Personal Interview, 28 November 2012). Due to a lack of insight regarding the government’s perspective, this paper focuses on the information of public health scholars, resettlement residents, and those working for NGOs. Future research efforts could be greatly enhanced through interaction with government authorities.

A final challenge encountered during research was a lack of health statistics for resettled populations. As Professor Rajib Gasgupta of Jawaharlal Nehru University explains: “the reporting system in New Delhi is very weak. One cannot find data for disease that is not waterborne” (Personal Interview, 27 November 2012). Thus, accurate statistics for non-waterborne illnesses were hard to obtain.

IV. Life in Delhi Slums

There are multiple types of housing that are considered to be slums based on the definitions outlined by the Slum Area Improvement and Clearance Act of 1956:

> Residential areas where dwellings are in any respect unfit for human habitation by reasons of dilapidation, overcrowding, faulty arrangements and designs of such buildings, narrowness or faulty arrangement of streets, lack of ventilation, light, sanitation facilities or any combination of these factors which are detrimental to safety, health and morals (Government of India, 2008: 2)

While the definition gives an idea of what life in a slum looks like, the conditions in many slums are even bleaker than described. To paint a picture of conditions, according to the National Council of Applied Economic Research (NCAER) survey

in 2012, 70% of slums do not have a proper system of waste disposal leading to garbage being dumped in the open (16). Only about half of all slums have drainage facility leading to open defecation in slums that leads to contamination of water sources (NCAER, 2012: 6). In addition, slums also have socio-economic disparities with the average median incomes of 2500 rupees per month (about $40 USD), and 40% of their populations relying on irregular daily wage employment (Ibid 26).

There are three different types of housing settlements that are often considered "slums." Slum designated areas, Jhuggi- Jhompri Clusters, and unauthorized colonies often fit the definition of a slum and are explained in greater deal below:

i. Jhuggi-Jhonpri (JJ) Clusters

Jhuggi-Jhonpri clusters are a category of unauthorized colonies. Those living in JJ clusters do not have legal rights to the land, and can face losing their homes at any time. JJ clusters are eligible for relocation and resettlement schemes, and populations discussed in terms of relocation generally belong to these types of settlements (Dasgupta, 2012: 54).

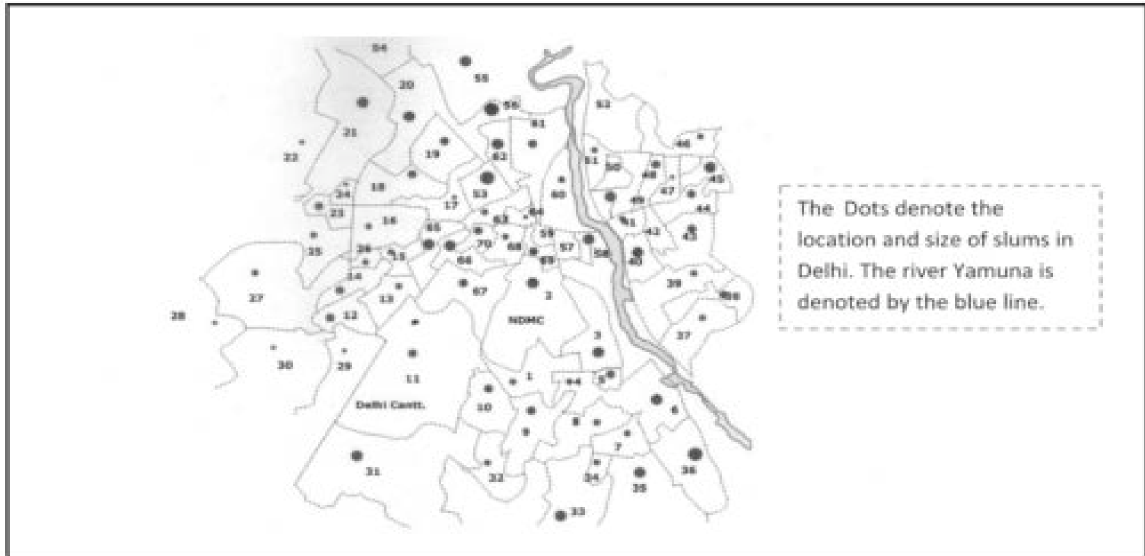

Figure 1: Location of Slums and JJ Cluster in Delhi

Source: Delhi Urban Environment and Infrastructure Improvement Project Part III, Slum Upgrading Programme Volume I

ii. Slum Designated Areas

In Delhi 1.8 million individuals live in slum designated areas, these are areas that have been notified or designated as slums under section 3 of the Slum Area Improvement and Clearance Act of 1956 and are considered to be unfit for human habitation. They are considered to be legal structures and are eligible for improvements and ensured them "protection from eviction without resettlement" (Bhan, 2009: 131)

Source: The Hindu

"A girl prepares to fetch drinking water in a slum designated area near the river Yamuna, in New Delhi"

iii. Unauthorized Colonies

Unauthorized colonies are settlements that have not been recognized by the Government of Delhi, are not considered legal structures, and are not eligible for civic amenities such as water or sanitation. However, unauthorized colonies tend to generally be wealthier settlements than slum designated areas or JJ clusters (Ibid 132).

V. Resettlement Colonies: Defining and Explaining

Source: The Hindu

Bawana Resettlement Colony

Currently in New Delhi, 12.71% of the population lives in resettlement colonies. These are defined in the 12th master plan as "planned areas," constructed by the state to relocate slum populations (Dasgupta, Rajib, Personal Interview, 27 November 2012). Slum populations from the more crowded central areas are relocated to underused land sites or the periphery of the New Delhi area. Generally the populations relocated originally lived in JJ-Colonies (explained in greater detail below). In theory these squatter resettlement colonies are developed with utilities that include: "paved roads, public parks, water supply, public lavatories, street lighting, drains, shops, schools, dispensaries and community centers" (Shrey, Kandoi and Srivastava, 2011: 5). Plot size in the resettlement colonies is 25 square meters, nearly one fourth of the size of what

was proposed in 1961 when resettlement colonies were first developed. Some members of the Bswana Resettlement Colony even report a plot size of 12.5 square meters (Sehgal and Narain, 2010: 2). The decreasing plot size, as will be discussed later, increases risk of communicable disease based on increasing population density. In the last thirty years responsibility for resettlement colonies has been passed from the DDA to the MCD.

VI. Slum Clearance Schemes:

Slum Clearance schemes in Delhi have been in place since 1958. While much controversy exists over the government's motives for implementation of Slum Clearance, this paper will provide a brief overview of the policies and their agenda as stated by the government of India:

i. Jhuggi-Jhonpri Removal Scheme of 1958

The Jhuggi-Jhonpri removal scheme (JJ Removal Scheme), also known as the Shanties and Removal Scheme, was initiated in 1958 and implemented in 1960 and terminated in 1958 (Dasupta, 2012: 9). In the scheme's beginnings, the City Development Plan (CDP) reported that Delhi had only 12749 JJ households scattered in the city ("City Development Plan", 2006: 1). Initially, the implementation of this scheme was entrusted to the MCD, but due to financial as well as other constraints was transferred to the DDA shortly after its implementation. The goal of the program was to improve the quality of life of slum dwellers through relocating slum populations to new areas, known as resettlement

colonies. Furthermore, resettlement schemes during this time period, especially during the 1970s and 1980s were all created with stated purpose of improving population health (Priya, Personal Interview, 21 November 2012).

The physical attributes of resettlement colonies and service provisions varied over the life of the JJ removal Scheme. In the 1960s the scheme allocated 67 square meter plots of land for each relocated household, in the 1970s the plot size was reduced to 21 square meters, and finally in the 1980s plot size was further reduced to 18 square meters. Up until the 1970s and early 1980s the scheme also called for the provision of physical infrastructure including "hand pumps, water taps, and street lights to be provided on a community basis" (Dasgupta, 2012: 9). Later in the 1970s and 1980s the MCD began to lay infrastructure on an individual basis.

The JJ Removal of 1958 scheme terminated along with the termination of the Sixth Five-Year Plan in 1985 (S. Singh, 2006: 54). This termination was representative of the general failure of the scheme. The program had been passed between implementing organizations (MCD to DDA) leaving room for gaps in implementation and inconsistencies in monitoring. Furthermore, there had been a number of revisions to the proposal that left an unclear path for the scheme to follow (Ibid 54).

ii. Relocation of JJ Squatters: The Present Approach to Resettlement

Following the Removal Schemes termination in 1985 there was no other settlement program carried out until 1992. However, between 1988-1989

established resettlement colonies were transferred from under the jurisdiction of the DDA to the MCD with the assurance that maintenance expenditures would be borne by the Government of Delhi (Government of NCT of Delhi, 2003). Then in 1992, the DDA formulated the Revised Resettlement Policy referred to as the Relocation of JJ Squatters (Narula, 2009: 148). The new policy sought to prevent the formation of new encroachments on public land, but also stated that past encroachments, those established before January 1990, "would not be removed without providing alternatives" (Ibid162). Thus, a three-pronged approach has been adopted to ensure the goals of the resettlement policy.

The three-pronged approach provides that squatter families on land pockets that are to be developed for government purposes should be relocated and allotted "developed sites and services plot of 18 square meters with 7 square meters undivided share in open courtyards as per the Cluster-Court-Town-House Planning Concept" (S. Singh, 2006: 48). The construction of these shelters would be financed through loans recovered over a period of 15 years. In areas where government land does not need to be developed, the second prong provides that current JJ clusters will be in-situ (on site) upgraded. The focus in this piece of the scheme will not be new development, but rather "modified layouts and redistributing the encroached land pockets" (Ibid 49). Shelter in these areas would be made into permanent housing through the establishment of basic infrastructure including water delivery, waste disposal, and paved pathways and drains. Loans would also be available for citizens of these resettlement colonies. The third prong of the approach laid out by this scheme is improving JJ clusters by

providing minimum basic civic amenities. As discussed at the Workshop-cum-Seminar on Urbanization in March of 1993, this third approach to slum improvement is the most commonly used and most globally recognized approach (Qasim, 1993). The amenities under this plan include: "drinking water, pay and use toilets and bathrooms, paved pathways, drains, street lights, dustbins and dhalaos for garbage collection, deployment of water tankers during summers and monsoons" (Ibid). It should also be noted that these amenities are to be provided on a community basis. This portion of the strategy falls under the jurisdiction of the MCD as of November 1991. It also differs from the other prongs of the approach in the sense that it heavily relies on the participation of non-governmental organizations (NGOs) and volunteer organizations (VO) for providing services to the resettlement populations.

Despite the three-pronged approach, the government failed to prevent fresh encroachments and the number of JJ Clusters increased from 929 in 1990 to 1,100 in 2001. However, this same policy approach will be continued under the Delhi Master Plan 2021:

> In so far as the existing squatter settlements are concerned, the present three-fold strategy of relocation from areas required for public purposes, in-situ up-gradation at other sites to be selected on the basis of specific parameters, and environmental up-gradation up-to basic minimum standards, as an interim measure, in rest of the clusters till they are covered by either of the first two components of the strategy, should be continued ("Guidelines for MPD-2021: 4.0 Shelter", 2012: 26).

Thus, in summary the approach taken for the last twenty years, and planned for the next twenty as well, is as follows: 1) clearance and relocation 2) in-

situ up-gradation and 3) environmental improvement schemes. It should be noted that in 2001, the Ministry of Urban Development and Poverty Alleviation drafted a piece of legislation known as the National Slum Policy, a policy that envisions the city of Delhi without slums (Narula, 2009: 158). Although it was never passed into law it demonstrates an attempt to modify the current slum resettlement policy. What differentiates this policy from current or past policy is it requires governmental entities to explore the option for in-situ up-gradation before relocation may be considered, and states that slum clearance should only occur in exceptional circumstances. It also spells out the requirement of improving access to social services in slums as well as an entire section dedicated to provision of basic services, inclusive of a "guide of principles on service provision" (Ibid159). In this way the National Slum Policy seeks to ensure "urban growth with equity and justice and makes a plea for greater participation of communities and civil society" (Ibid158). Interestingly, when Dr. Ansari, former director of the School of Planning and Architecture, and Dr. Ritu Pyria, professor at Jawaharlal Nehru University, were asked about their feelings regarding the National Slum Policy, their response was one of indifference. "I cannot quite remember everything about the plan, but I remember I was not very impressed when reading it," replied Dr. Ansari (Ansari, Jamal, Personal Interview, 15 November 2012). This lack of enthusiasm over the policy could be attributed to the plan's inability to identify means to reach its lofty goals, which also remains as one of the reasons it never became policy.

Table 1: Summary of Slum Clearance Schemes

	Time Period	Implementing Body	Objects/goals	Main Policy Change
JJ-Removal Scheme	1958-1985	MCD then DDA	-clear unplanned densely populated slum areas -relocate slum residents to planned developments on periphery of Delhi	
Relocation of JJ squatters	1992-present	DDA then MCD	-Prevent new encroachments of unplanned developments -Population density control -upgrade slum areas with necessary water and waste disposal facilities	Switch from single pronged approach of relocation to three pronged approach to slum improvement.

VII. Failures of Rational Planning Model in Planning Resettlement Colonies

It is important to note that while cases identified fall under failures of the planning process itself, many are dual-natured and also have a political component that will also be addressed in the next section of this thesis. The cases that will be discussed identify failures in the following categories: stating goals and objectives and identifying priorities; collection and interpretation of data and information; administration of plan implementation, monitoring and response to feedback and

finally addressing the politics of the planning process. Failures in each of these components of the Rational Planning models will be explored using examples from resettlement policy in Delhi.

i. Stating Goals and Objectives and Identifying Priorities

One of the initial steps in the rational planning process involves setting goals, and these goals then set the framework for the following steps of planning. The stated goals for resettlement in Delhi can be found in within the master plan for the city of Delhi, specifically in the section labeled "Shelter." In the *Draft Master Plan for New Delhi-2021* the section on "Shelter" states: "The Plan policy regarding 'Shelter' is based on The National Housing and Habitat Policy" ("Guidelines for MPD-2021: 4.0 Shelter" 20). The goals of the National Housing Habitat Policy are general in nature and include: 1) "promoting appropriate ecological standards for protecting a healthy environment and providing a better quality of life in human settlements" and 2) "encouraging state governments, urban local bodies, and development authorities to periodically update their master plans and zoning plans which should, adequately provide for housing and basic services for the urban poor" (National Urban Housing & Habitat Policy, 2007). Both very important, but never the less, broadly defined goals.

While the planning policy for "shelter" in Delhi aligns itself with stated goals of the National Housing and Habitat Policy, the goals come from an organization working on national policy level in a country of over 1.27 billion people, and there is a clear failure to localize the goals for establishing developing shelter policy in

Delhi. What allows for this failure to occur is that in the rational planning model the goals come from elected officials, those considered to be acutely aware of the needs of the people they represent, but in the case of slum populations live in a completely different social and economic sphere. The disconnect from the social and economic worlds in which planning takes places is one of the many criticisms of the rational planning model, and is no more evident than in the formulation of goals for resettlement.

ii. Collecting and Interpreting Data and Information

Collecting and interpreting data can be considered the research phase of planning. This phase generally includes population forecasting, land-use inventory, infrastructure inventory, circulation assessment, economic survey, soil examination, and recreational inventory (Levy, 2011: 128-129). The research phase is a necessary portion of planning in understanding the present state of both physical and non-physical aspects of the planning environment, and only through understanding the present can a true path for the future be forged.

The practice of placing Resettlement Colonies on plots in the peripheries of Delhi points to a clear failure in data collection and interpretation portion of the planning process in relation to assessing the needs of resettled citizens. Proximity to health care is an issue that has been poorly researched throughout the last seventy years of resettlement schemes, and has worsened as the urban area continues to expand. The periphery of Delhi now sits much farther out than it did in 1958, and health care facilities on the outer fringe of Delhi will continue to be

scattered and unable to adequately serve populations resettled to these areas, unless a serious increase in infrastructure development occurs. The best study of the absence of health care facilities in resettlement colonies was conducted by Vasudha Dhingra, Rini Joshi, Faraz Naqvi, Brian Chin in 2006 when they looked at services for mothers and infants in the Manpur Khadar Resettlement Colony and found that the closest hospital was over 20 kms away (2). However, through proper data collection and analysis, the availability of health services for these populations can be determined before any relocation occurs.

Selecting a location for resettled colonies requires a thorough analysis of facilities located within an accessible distance from resettlement colony development, and even a determination of what constitutes "accessible." These are generally socially and economically vulnerable populations that rely on public transportation (another need that should be considered in data collection) or travel by foot and proximity plays a huge role in how and when individuals receive health care. In an interview with a resident at the Bhalswa Resettlement colony, the resident explained what relocation meant for her healthcare, "I wait to go to the hospital because it takes too much time and more money to reach, much more than it did before we were moved to this location" (Bhalswa Resettlement Colony Resident, Personal Interview, 20 November 2012). The story of this resettlement resident is one that many resettled residents are familiar with, however there are ways to prevent this situation from becoming the norm.

Tools are currently available to take inventory of health care facilities and other facilities that should be available in all settlements. In fact, with

Geographical Information Systems technology mapping land and infrastructure has become easier than ever before. GIS compiles information from multiple databases and coverts it into a visual representation that can be manipulated by the user to highlight important information. This mapping too has already become an integrated into planning in many different parts of the world, and could prove to be a key solution for troubles with data interpretation.

iii. Assessing alternatives and Evaluating Potential Impacts of Plans

The present approach to slum clearance outlines a three pronged approach: in-situ up-gradation of slums, environmental improvement, and clearance and resettlement. A number of considerations are involved in the assessment and development of alternatives. Financial, social, and environmental factors must all be weighed carefully, and combined together to create a plan that takes into account each of these issues. The choice to resettle communities rather than to up-grade or allow for environmental improvements suggests a failure to comprehensively assess the alternatives, and at the very least reveals an inability of this scientific development of a plan to take into account environmental and social considerations.

As an alternative to resettlement, the policy of in-situ up gradation focuses on 1) “socializing” the land where slums exist so that plot size will be regulated and 2) updating the housing to pucca shelters benefiting the residents of the slum clusters (*State of Urban Health*, 2003: 16). In all only about 180 of the estimated 860 JJ clusters have been in-situ upgraded. Another alternative strategy focuses on

installation of basic amenities to improve the standard of living of slum dwellers, ie. installing waste collection facilities and installing water taps to decrease the health issues stemming from open defecation in slums. Both of these approaches have received support from international organizations like the World Health Organization and scholars focused on slum issues (Ingleby, David, Personal Interview, 19 November 2012).

The rationale behind resettling slum colonies is to clear government land so that it can be used in the public interest. This rationale basically as follows: while some slum populations may face adverse consequences due to resettlement, because those populations are much smaller than the overall population; the benefits for the good of the whole are seen as vastly overshadowing the negative impacts on the slum dwellers. According to the government of Delhi, 20% (estimates from other sources have been quoted as high as 50%) of the population lives in slums and thus, the slum populations are in the minority and the numbers of those who would benefit from the clearance of this land greatly surpasses that of slum residents.

However, this author argues that present approaches regarding slum resettlement have failed to incorporate data that could not necessarily be quantified, yet heavily impacted the success of the chosen plan. The problem with the rational planning model and its ability to asses alternatives, select a plan, and evaluate potential impacts of the plan is that not everything in this process can indeed be measured or at least measured with ease. Thus, the factors that can be quantified tend to be focused on more heavily because they can be presented as

objective. Social issues such as removing individuals from social networks and their workplace aren't considered until the quantitative data is analyzed. In his 1988 study Ashok Basu set out to quantify the social and environmental aspects of resettlement and concluded:

> The socio-economic condition of the squatters has not changed after they were shifted to new resettlement colonies; secondly, that, in fact, the condition of the squatters had somewhat deteriorated after they were shifted; and lastly that the socio-economic condition of the squatters in the resettlement colonies did not improve with the passage of time much against official belief (227)

While resettlement, and the idea of providing new fully serviced facilities looks good on paper, in actually the impacts can be detrimental, especially when the chosen policy is not implemented effectively.

iv. Administering Plan-Implementing Programs, Monitoring Their Impacts, and Amending Plans in Response to Feedback

Implementation, monitoring, and amendment of plans all require careful execution to ensure all the work in developing and establishing a policy can be successfully carried out. These steps are continuous and require time, staff, and financial investment. For these reasons implementation of plans and monitoring of plans can often end up falling short of their promises. Resettlement colonies offer multiple examples of failure to implement, monitor, and revaluate plans put into place.

Implementation of resettlement policy in Delhi falls far from being considered complete, and the inability to start resettlement colonies off on the right foot has incredible health costs. In the initial stages of resettlement the

individuals involved are just put down in a new area where the only sign of planning present is the demarcation of each families plot size. Professor Ansari further describes the scene: "Maybe a few hand pumps are installed initially and over a period of time some structures may be put into place, but they are generally badly maintained and unusable" (Ansari, Jamal, Personal Interview, 14 November 2012). Thus as the time passes the residents of resettlement colonies have some temporary shelter but they have to manage to live with very minimal services and infrastructure, much less than that promised in the resettlement plans. *The Hindu* recounts a story that that illustrates the outcomes of failure to implement basic services as described by Mr. Ansari and others working with resettlement colonies. Within a few months of being relocated from Yamuna Pushta area, people of the Bawana Resettlement colony began to fall ill, and reportedly seventeen died (Sikdar, 2012). The reason for the illness was attributed to the absence of safe water sources. Without access to well or piped water, resettlement colony residents had resorted to self-installation of shallow hand pumps.

Aside from water and shelter, under current resettlement policy paved roads and power are to be provided in resettlement colonies. In addition to accessibility, one of the reasons for providing paved roads is to elicit better health outcomes through prevention of seepage of waste into water sources (Priya, Ritu, Personal Interview, 21 November 2012). Power in resettlement colonies also promotes health through eliminating the need for using fuel sources that can affect health. According to the United Nations:

> Smoke from incomplete combustion of solid fuels contains many substances known to be toxic to human health through a variety of

> mechanisms. Among these pollutants, small particulate matter and carbon monoxide have been most commonly measured in homes using solid fuels (UNDP/WHO, 2009: 22).

While policy even in the earliest resettlement schemes has called for provision of an adequate power supply and paved roads, many resettlement colonies are still without these services, again demonstrating the failure to implement plans and failure to monitor and ensure that implementation has occurred.

Dunu Roy of NGO Hazards Centre pins the blame on the Delhi Government for inhabitable conditions: "These colonies were not unauthorized settlements that came up on public land. These colonies were planned…supposed to be built by the government, supposed to have civic facilities before the people moved in" (Perappadan, 2012). Chetyenala, a non-profit organization, issues a similar statement on behalf of the resettlement colonies they operate in. "We are not asking the Government to provide them with top-of-the-line facilities, but give them what has been promised to them, including shelter, clean drinking water, sanitation facilities, a means to earn a livelihood and a place to bury their dead" (Sikdar, 2012).

The implementation of many aspects of the Master Plan in resettlement colonies is adequate at best, and as time goes on an implementation of all promised services fails to be complete, citizens of the resettlement colonies take planning into their own hands further exacerbating the health issues already present in these colonies. For example, to accommodate large families on small plot sizes, families will build extra rooms in order to house more persons. As one can imagine citizens taking planning, building and development into their own

hands can lead to overpopulation: "Because of these violations in implementation, whatever plans were envisaged were not adhered to and as a result colonies often relapse into slum like conditions" (Dasgupta, Rajib, Personal Interview, 27 November 2012). A clash between centralization and decentralization also occurs in resettlement colonies. For example a micro plan in a resettlement colony may call for decentralized utilities in order to promote the best health outcomes, yet the larger Master Plan calls for centralized services. Thus, the micro plan cannot operate successfully within this larger plan, and creates another basis for resettlement colonies to retrogress to slum-like conditions (Priya, Ritu, Personal Interview, 21 November 2012).

VIII. Politics of Planning:

i. Abuse of Power

Since 1975, different governments have adopted policies to forcibly evict such people from the city centre Delhi to the resettlement colonies at the city's peripheries.

> The master plan for Delhi is supposed to be the blueprint for developing the entire city, and it is supposed to be prepared by including active participation of the city's residents. The planning of the city has remained the prerogative of a few government officials and technical experts, however, with no role for the people to play. The master plan has been violated systematically by many governmental and semi-governmental agencies (Tiwari, 2003: 445).

The structure of the rational plan, allows for this practice of abuse to continue because those that hold the power: the politicians, the planners, and the bureaucrats, do not have a system that checks their power and authority. As Innes

and Booher highlight in their publication *Planning With Complexity: An Introduction to Collaborative Rationality for Public Policy*, the figures of authority are able to cloak the politics of their decisions, through pointing to the technical nature of the rational plan and using it to legitimize their decisions (2012, 18).

Multiple cases within resettlement colonies exemplify the political imbalance of policies implemented and developed using the rational approach to planning. The decision to implement relocation policy and location choice of resettlement colonies provides the most interesting example. In the previous section of this thesis, deficiencies relating to location choice of the resettlement colonies were addressed both in terms of data collection and the evaluation of potential impacts. There is a third deficiency inherent in the rational planning process that being the abuse of authority. The sites where slums residents reside generally are located on government land that lies in central urban areas. These lands hold incredible real estate value in the rapidly urbanizing city of New Delhi. The decision to move sites to the periphery of Delhi contradicts the recommendations of the Master Plan, which argues for "integration of people from different cross-section of income groups in residential neighborhoods" to ensure a mutually beneficial relationship between the economically disadvantaged and the wealthy (Dewan, 2002). Instead of complying with master plan, as Jamal Ansari explains "They [who] will not give them [resettled populations] the good land they place these people on the cheapest lands available" (Ansari, Jamal, Personal Interview, 14 November 2012).

Sometimes the "cheapest lands" are those that expose residents to health risks. The sites are often located on low-lying wasteland, along drainage ditches, or sometimes on sites previously holding waste or close to waste dumping sites (Dasgupta, 2012: 268). Delhi produces the largest amount of solid waste in the country, about 700 metric tons, and most of it gets dumped in three areas: Bhalaswa, Ghazipur and Okhla, all of which contain resettlement colonies (Bhalaswa Lok Shakti Manch, 2012). The landfill site in Bhalaswa, in particular, provides an example of a poor location choice. From a geological standpoint, this site sits near a lake on flood plains and additionally lies on an aquifer (Ingleby, David, Personal Interview, 19 November 2012). Eleven years ago, well after the construction of the sanitary landfill site in Bhalaswa, the Delhi government decided to commence construction of a resettlement colony. The government never made a statement on whether or not it was aware that the landfill site had been improperly built and maintained at the time of commencing development of the resettlement colony. Recent detailed studies of the groundwater in the area indicate that leaching from the waste into resident's water (88% of residents obtain water through public stand posts) has occurred, and problematically 26.5% of the population reports cases of diarrhea and vomiting (Bhalaswa Lok Shakti Manch, 2012). The resettled citizens must then choose to live with the public health threats present at the resettlement site, or if they are financially able will move back to the dense urban areas and try to find a home in a new slum.

In addition to resettlement location choice the shrinking plot sizes in resettlement colonies along with the switch to communal services rather than

private demonstrates interests of the policy makers and planners taking precedent over those of the resettled populations and just as significantly demonstrates a direct violation of public health knowledge; the quartering of large populations in small spaces vastly increases the risk of communicable diseases like as cholera. In the 1960s when the first resettlement colonies were developed residents were allotted a plot size of 80 square meters. Between 1975 and 1977 twenty-seven resettlement colonies were built all with an allotted plot size of 25 square meters, and it was these colonies that were among the most affected during Delhi's 1988 Cholera outbreak. Yet despite public health risks, presently plot size allotted is only slightly more than ten square meters (Dasgupta, 2012: 268).

Furthermore, while the JJ Resettlement Scheme of 1958 initially provided collective services for resettled populations, it switched to providing services to individual households. This switch to individual services meant less chance of residents coming into contact with contaminated water or fecal matter that leads to disease (Dasgupta, Rajib, Personal Interview, 27 November 2012). With the termination of the JJ Resettlement Scheme of 1958 and the implementation of the three-pronged approach of the 1990s, provisions of services again were provided on a community basis (Ansari, Jamal, Personal Interview, 15 November 2012). The minimum standard for public latrines in resettlement colonies is one latrine for 20-50 residents but through physical surveys of resettlement colonies Rajib Dasgupta of Jawaharlal Neru University found generally it was one latrine per 150 persons (Dasgupta, 2012: 268). Both the shrinking plot size and communal sanitary services contradict established understanding of the transfer of

communicable disease. However, those in power overlook the glaring health needs of resettled populations to focus on the economic bottom line.

ii. Citizen Involvement:

As previously mentioned one of the criticisms of rational planning theory is the lack of input from stakeholders especially citizens. Proponents of the rational planning model maintain that there is a role for citizens to be involved within different pieces of the planning process, however, providing for citizen participation in the plan process violates certain of the central assumptions of the rational planning model. The rational planning model bases decision on objective information. Allowing citizens input from individuals with emotional attachment to the issues at hand would dilute the objectivity of the planning process (Mäntysalo, 2005: 3). Thus, in many situations utilizing the rational planning model, citizen involvement in the planning process becomes superficial, and decisions are left up to the planner, who with his expertise should know what is best for the citizens.

Sherry Arnstein developed the ladder of citizen involvement to highlight the different definitions of what can be considered citizen involvement. Arnstein's theory can be applied to different situations to assess the degree of citizen involvement allowed. The steps on the ladder are as follows: 1) manipulation, 2) therapy, 3) informing, 4) consultation, 5) placation, 6) partnership, 7) delegated power, and 8) citizen control (Arinstien 1969: 217). The first two categories are

considered to be nonparticipation; categories 3-5 tokenism; and only the last three are considered to be citizen involvement.

Assessing where the rational planning model falls on the ladder of citizen involvement within the context of resettlement policy requires research outside the scope of the present thesis. However, assessing the process taking place in Delhi in securing citizen involvement demonstrates involvement consistent with lower rungs of the ladder. For example, the citizens' involvement process involves posting notice of plan reviews, but these announcements are posted in paper notices in public places. The Delhi Municipal Corporation reports that only 10.8% of the slum population is literate, so even when notice is given regarding public meetings for policy decisions nearly 90% of a population of stakeholders affected by the policy are not able to read about it. Then comes the issue of time, individuals living in slums often live well below poverty line. In a study conducted in 1988 by Ashok Basu, 34% of squatter residents have an income of less than Rs. 150, 37% between Rs. 151-250, and 16% between Rs. 251-350 and the remainder between 351-550 per day (Basu 136)[1]. Additionally, many slum citizens will work well over the eight hours a day, a span of time considered to be full time work in Western countries. Therefore, finding the time to attend a public review of a plan may well be unlikely. Finally, issues of social status and cast impact these citizens' opportunity to participate. The cast system still plays a pivotal role in the social hierarchy of India. The religious, ethnic, and economic group of one's parents often

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[1] For perspective, in 1988 the rupee/US dollar exchange rate was approximately 15 Indian Rupees to One U.S. Dollar (Board of Governors of the Federal Reserve System)

determines one's future employment, education, and economic well-being. Ninety percent of JJ cluster residents fall into the category of scheduled castes[2] (National Capital Region Planning Board, 2012: 1). Groups that are considered to be in the social minority not only feel uncomfortable coming into the political arena, but also face discrimination upon doing so. Thus, due to the obstacles in place for slum dwellers, their involvement in policy development is limited at best.

IX. Future Recommendations for Planning Approaches:

Currently the government uses an approach to slum clearance and resettlement that operates off a model most closely resembling that of the rational planning model. There is a push for a policy of either slum up-gradation or relocation, but "there is a need to diversify the situation for a diverse context" (Priya, Ritu, Personal Interview, 21 November 2012). Pressure from international models of urban development, including the rational model of planning, leads to health disparity among resettled populations. As Pyria Ritu of JNU explains, there exists a certain international understanding of what urbanization and urban development should look like in Delhi, and the government makes an attempt to keep up with those international models. Problems then arise "because we [India] do not have the same resources. It is not a sustainable practice. We are so engrossed with 'the best' that there is no consideration of use of existing

[2] The "Scheduled Castes" is the legal and constitutional name collectively given to the groups which have traditionally occupied the lowest status in Indian society and the Hindu religion which provides the religious and ideological basis for an 'untouchable' group, which was outside the caste system and inferior to all other castes (.

infrastructure and resources" (Priya, Ritu, Personal Interview, 21 November 2012). "The plans that have been adopted (in the past and presently) are developed in the west and probably suited to their conditions" (Priya, 2012: 830). What Priya is able to highlight is the need for local solutions and practices rather than using a blanket approach throughout the world.

Swati Ramanathan in her White Paper successfully highlights the global vs. local issue:

> What exactly does the word global imply in the context of the design of a city? Is it McDonaldism, where one feels comfort in the familiar and consistent and predictable? This seems more dismaying than desirable. Instead, we must have design policies that celebrate innovation and individuality that contributes the entire city, and also pulsates to the drumbeat of an organic local culture (Ramanathan, 2005: 10).

What is taking place in Delhi fits within this idea of McDonaldism. The need for slum improvement policies are evident, however, attempting to solve them using a theory because it is widely used in other contexts ignores the unique complexities of the city of Delhi and its slum populations.

In the future, policy makers should develop plans more suitable to the environment of New Delhi through community engagement, extensive use of emerging technology such as GIS mapping, and incorporation of health surveys and studies into the planning policies. What is needed is an overall more participatory approach to planning, because the rational planning models frequently adopted by planners "assumes unrealistically that wolves and sheep may have common interests and the same capacity to lobby for these. The answer, we believe, is to encourage the self-organization of the powerless and accept that

conflict may be a part of the process of negotiating a solution" (Argentina Report, 1999: 32).

A number of different planning theories, which have been developed and utilized, encompass many of the qualities that experts of the planning field Delhi have delineated as needed for their city. The participatory approach takes into account the "social, economic, political, and environmental systems" that the rational planning model fails to incorporate (Seitz, 2001). The participatory approach is grounded in community efforts: community goal setting, data gathering, plan selection, implementation, and monitoring. These processes restructure the power of decision making from being solely in the hands of planning experts to a partnership. Overall this approach is a much more local approach, that in theory offers solutions for many of the shortcoming of traditional planning models.

Even small-scale activities already taking place in Delhi contain elements of new planning theories. For example, when the Delhi Water Board failed to provide adequate water services to the New Sanjay Amar Colony (NSAC), the National Institute for Urban Affairs (NIUA) stepped in to facilitate a Public Participation Geographic Information Systems Program (PPGIS). PPGIS demonstrates a small-scale example of a participatory approach to planning for water distribution in the City of New Delhi. "Central to the PPGIS movement is the belief that GIS is a powerful tool for facilitating collaborative planning processes and empowering citizens to influence planning and policy-making" (Hoyt, 2005: 1). The first step is community visioning to identify the largest problems of the community, and then

citizens are asked to develop their own maps of their surroundings and services. Illiterate individuals use symbols rather than written word throughout the process to allow increased participation. The NIUA then sent this information back to headquarters, digitalized it, and then returned it to community members, who then submitted the information to the water board. The efforts were deemed a success when the water board sent engineers to NSAC. "[S]ome of the negotiations with field engineers were led by women residents who have customarily had little or no say over service delivery improvements; a construction crew broke ground to lay new pipelines and install new stand posts [. . .]" (Ibid 13). Additionally, women were trained on how to maintain these new installments (Ibid). The overall impact of the program was to empower citizens to become part of the planning process in every step from data collection to monitoring of plans. With the success of programs such as Public Participation GIS, future use of the participatory approach may be a path that New Delhi planning authority should choose to take.

Aside from the participatory approach, other approaches that may fix the shortcomings of the rational planning model include the collaborative planning model, communicative planning theory model and the advocacy-planning model. While all of these models may provide alternatives to the missing or broken aspects of the rational planning model, the planning approach chosen in Delhi needs to be something selected and developed within the country as the individuals with the most knowledge regarding the city's needs are those that have grown up knowing its complexities

X. Conclusion

The rational approach to planning has gained wide spread popularity in the last sixty years through countries of the world. While proponents of the model praise it for its scientific approach to problem solving, critics see the model as intrinsically flawed and easily manipulated. In the case of Delhi, the flaws of this planning model are readily evident in the when analyzing the resettlement policies implemented thus far. Failure to set clear localized goals, collect and interpret necessary data and information, evaluate potential impacts of plans, and implement and monitor plans are evident flaws found when analyzing the resettlement policy of the last fifty plus years. In addition to failures within the steps of the planning process, the use of the rational planning model has created a setting where political manipulation as well as shallow levels of citizen involvement have adversely impacted the success of the resettlement policies. With all of the potential for the rational planning model to be misused or ineffective in developing resettlement colonies, the future of slum clearance and resettlement must look to new approaches. Approaches such as community engagement and the participatory approach allow for the unique planning and public health issues facing Delhi to be tackled by groups and individuals closest to the matters, those that have the most to lost from flawed planning practices. Only through recognizing the flaws of the present approach to slum clearance and resettlement can the future of the urban poor be set on a trajectory for success.

XI. Citations

Primary Sources

Argentina Report. (1999).

Ansari, Jamal, Former Director of the School of Planning and Architecture, Personal Interview, School of Planning and Architecture, 15 November 2012.

Chaudhuri, Jana, Delhi Development Authority Architect, Personal Interview, Dilli Hatt, 28 November 2012.

Dasgupta, Rajib, Professor, Personal Interview, Jawaharlal Nehru University School of Social Sciences, 27 November 2012.

Ingleby, David, Consultant, Personal Interview, Habitat India Headquarters, 19 November 2012.

Resident, Personal Interview, Bhalaswa Resettlement Colony, 20 November 2012.

Siraj, Abid, SIT Academic Coordinator, Personal Interview, SIT New Delhi, 23 November 2012

Staff, Hazards Centre, Personal Interview, Hazard Centre Headquarters, 21 November 2012.

Priya, Ritu, Professor, Personal Interview, Jawaharlal Nehru University School of Social Sciences, 21 November 2012.

Secondary Sources

Arnstein, Sherry R.(1969) 'A Ladder Of Citizen Participation', Journal of the American Planning Association, 35: 4, 216 — 224

Banerji, Manjistha. *Provision of Basic Services in the Slums and Resettlement Colonies of Delhi*. Institute of Social Studies Trust, 1 Jan. 2005. Web. 5 Nov. 2012.

Bartolome, L., de Wet, C., Mander, H., & Nagraj, V. (2000). Displacement, Resettlement, Rehabilitation, Reparation, and Development.

Basu, Ashok Ranjan. (1988). *Urban Squatter Housing in the Third World*. Delhi, India: Mittal Publications.

Bhalaswa Lok Shakti Manch. *Ground Water Quality and Health Impacts in Bhalaswa*. Rep. New Delhi: Hazards Centre, 2012. Print.

Bhan, Gautam. (2009). "This is no longer the city I once knew". Evictions, the urban poor and the right to the city in millennial Delhi. Environment and Urbanization, 2(1), 127-142.

Centers for Disease Control and Prevention. Establishing a Holistic Framework to Reduce Inequities in HIV, Viral Hepatitis, STDs, and Tuberculosis in the United States. Atlanta (GA): U.S. Department of Health and Human Services, Centers for Disease Control and Prevention; October 2010.

Center for Civil Society. No State of Governance: Delhi Citizen Handbook. New Delhi: Parth J. Shah, 2009.

_______. Narula, Kritika. "Delhi Development Authority or Delhi Destruction Authority?" No State of Governance: Delhi Citizen Handbook. New Delhi: Parth J Shah, 2009. 153-64. Print.

_______. Singh, Pratima. "Sheltering Delhi's Slums." No State of Governance : Delhi Citizen Handbook. New Delhi: Parth J Shah, 2009. 143-51. Print.

City Development Plan (2006). Delhi.

"Introduction." *Department of Planning*. Government of NCT of Delhi, India: 2013. Web.

Dupont, Veronique. "Slum Demolitions in Delhi Since the 1990s : An Appraisal." *Economic and Political Weekly* 43.28 (2012): 79–87. Print.

Dasgupta, Rajib. *Urbanising Cholera*. Ed. Sanjoy Bhattachayra & Neils Brimnes. New Delhi: Orient Black Swan, 2012. Print.

Geddes, Patrick, and Jaqueline Tyrwhitt. Patrick Geddes in India; London: L. Humphries, 1947. Print.

Government of Delhi. Approach to the 12th Plan: Challenges of Urbanization in India. Rep. New Delhi: 2011. Web.

Government of Delhi. Department of Urban Development. *Solid Waste Management*. By IL & FS Ecosmart Limited. New Delhi: 2011. Web.

Government of India (2008). Report of the Committee on Slum Statistics/Census New Delhi.

Government of NCT of Delhi. Planning Department. *Economic Survey of Delhi 2001-2002*. New Delhi: 2003. Web.

Greed, Clara, and Clara Greed. Introducing Planning. London: Athlone Press, 2000. Print.

“Guidelines for MPD-2021: 4.0 Shelter.” (2012): 20-35. Web.

Gupte, M.D., Ramachandran, Vidya, & Mutatkar, R.K. (2001). Epidemiological Profile of India: Historical and Contemporary Perspectives. *Journal of Bioscience, 26*(4), 437-464.

Hebbert, Michael. "A City in Good Shape: Town Planning and Public Health." *Town Planning Review*, 70.4 (1999): 433-453

Hoyt, L., R. Khosla, and C. Canepa. 2005. “The Power of Sticks, Leaves and Pebbles: Building a Participatory Public GIS in New Delhi, India.” *Journal of Urban Technology* 12(1): 1-19.

Innes, Judith E, and David E. Booher. Planning with Complexity: An Introduction to Collaborative Rationality for Public Policy. Milton Park, Abingdon, Oxon: Routledge, 2010. Internet resource.

Jordan, Harriet. (1994). "Public Parks, 1885-1914." Garden History 22(1): 85-113.

Joseph, Nikhil, and Pascal Goodman. *On the Outskirts of Legality: Policy and Legal Aspects of Slum Resettlement in Delhi*. Working paper no. 197. New Delhi: Centre for Civil Society, 2008. Print.

Kinyashi, George. (2006). Toward Genunie Participation for the Poor.

Levy, J. (2011). *Contemporary Urban Planning* (9th ed.). Longman.

Luzzi, J. Ecosystem Workforce Program, University of Oregon. (Nov. 3, 2001). The Rational Planning Model in Forest Planning: Planning in the light of Ambivalence. Retrieved November 1, 2009, from http://ewp.uoregon.edu/pdfs/wp2.pdf.

Mantysalo, R. (2005). Approaches to Participation in the Urban Planning Theories.

Marmot, Michael. “Social Determinants of Health Inequalities.” *Lance* 365.9464 (2005): 1099–1104.

Ministry of Housing and Urban Poverty Alleviation. National Buildings Organisation. "Report of the Committee on Slum Statistics/Census." Accessed November 6, 2012. http://mhupa.gov.in/W_new/Slum_Report_NBO.pdf

National Capital Region Planning Board. (2012). Study on Counter Magnet Areas to Delhi and NCR: Ministry of Urban Development.

National Capital Territory of Delhi Laws (Special Provisions) Bill. Lok Sabha, 2011. Print.

National Council of Applied Economic Research (2002), The burden of ill-health among
the urban poor: The case of slums and resettlement colonies in Chennai and Delhi,
NCAER, Delhi.

Perappadan, Shajan. "Unsettled Life in Bawana Resettlement Colony." The Hindu. 06 July 2004. Web. 10 Nov. 2012.

Priya, Ritu. "Planning, Urban Poor and Some Explorations from Delhi." *Economic and Political Weekly* 28.17 (2012): 824–834. Print.

Qasim, Sayed. *Workshop-cum-Seminar on Urbanisation, Slum Development, and Urban Renewal in India*. Socio-Economic Research Foundation. New Delhi, Delhi. 5 March 1993.

Ramadoss, Anbumani. "Preventive Healthcare in India is still at Early Stages: Dr. Ramadoss." Ministry of Health and Family Welfare. September 12, 2007. Web. November 21, 2012.

Ramanathan, Swati. (2005). White Paper on Sustainable Urbanization in India.

Rein, Martin,White, Sheldon H.Policy Research: Belief And Doubt. [Cambridge, Mass.] : Joint Center For Urban Studies Of M.I.T. And Harvard University, 1977. Print.

Scott, J. C. (1998). Seeing Like the State: How Certain Schemes to Improve the Human Condition Have Failed, Yale University Press.

Seghal, Prashansa, and Jayati Narain. *Celebrating Lives in Bawana*. Rep. New Delhi: Hazards Centre, 2010. Print.

Seitz, V. (2001). "A New Model: Participatory Planning for Sustainable Community Development." Race, Poverty and the Environment. from http://www.urbanhabitat.org/node/920.

Shrey, Sahay, Siddhartha Kandoi, and Soumil Srivastava. *Urban Planning in India*. Banaras Hindu University, 2011. Web. 11 Nov. 2012.

Sidkar, Shubhomoy. "Dumped, Not Resettled." *The Hindu*. 21 Apr. 2012. Web. 12 Nov. 2012.

Singh, Saptal. Solid Waste Management in Resettlement Colonies of Delhi: A Study of People's Participation and Urban Policy. New Delhi: Bookwell, 2006. 39-57. Print.

State of Urban Health in Delhi. (2003). New Delhi: Ministry of Health and Family Welfare.

Tiwari, Geetam. (2003). Transport and Land-use Policies in Delhi. *Bulletin of the World Health Organization, 81*(6).

Tomes, Nancy**.** *The Gospel of Germs: Men, Women, and the Microbe in American Life.* Cambridge, MA and London: Harvard University Press, 1998.

Urban Health Resource Center (2013). "National Urban Health Mission." from http://www.uhrc.in/module-ContentExpress-display-ceid-95.html.

UNDP/WHO. *The Energy Access Situation in Developing Countries*. 2009. Print.

Vargas, Silvia, Garces, Anamarie, & Rouse, David. (2012). *Planning Prescriptions: Integrating Public Heatlh into Community Plans.* Paper presented at the American Planning Association 2012 Conference, Florida.

Wallis, Patrick, 'Richardson, Sir Benjamin Ward (1828–1896)', *Oxford Dictionary of National Biography*, Oxford University Press, 2004; online edn, May 2008 [http://www.oxforddnb.com/view/article/23544, accessed 24 Nov 2013]

Organization, World Health. (2013). Global Health Estimates Summary Tables. Geneva, Switzerland.

Zeller, J. (2002). GIS in Developing Countries, Sheffield University.