WATER AND SANITATION IN SÃO PAULO, BRAZIL: SUCCESSFUL STRATEGIES FOR SERVICE PROVISION IN LOW-INCOME COMMUNITIES

by

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ABBREVIATIONS

CETESB	São Paulo State Environmental Protection Agency
COBES	Bureau of Social Welfare (Coordinadoria de Bem Estar Social) (1977-1981)
COHAB	State Public Housing Development Agency
EMURB	São Paulo Municipal Development Agency
FABES	Bureau of Social Welfare (Secretaria de Família e Bem Estar Social) (1982-1985)
HABI	Division of Popular Housing, Secretariat of Housing
NSM	New Social Movement (Literature)
PEAD	High Density Poliethelene
PMSP	São Paulo Municipal Government
PT	Worker's Party
SABESP	São Paulo Water and Sewer Company
SEHAB	Municipal Secretariat of Housing and Urban Development
UNDP	United Nations Development Programme
WB	World Bank

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ABSTRACT

This thesis explores the role of community pressure in increasing water and sewer provision to previously-excluded squatter settlements and illegal subdivisions in São Paulo, Brazil between 1979 and 1991. User pressure increases agency responsiveness and accountability, but this is only possible if democratic guarantees allow excluded groups to mobilize, and permit reform-minded politicians and agency staff to overcome long-standing and entrenched resistance to service extension. Effective mobilizations are cyclical, decentralized, and do not necessarily develop into politicized movements. Periodic waves of mobilization show movement tenacity, rather than weakness and a retreat into non-engagement. Low-visibility community management activities during demobilized periods foster leadership continuity and a latent capacity for mobilization within the community. Thus, communities can rapidly re-mobilize, occasionally forming temporary district-level federations when the need arises.

Constructive competition from small municipal agencies, combined with reform pressure from the state governor and ongoing community mobilizations have forced the larger specialized water and sewer agency in São Paulo to improve squatter settlement service. Small, multi-purpose municipal agencies, with staff committed to working with poor and at-risk residents, have pioneered service programs for squatter settlements in two periods over the past twelve years. The municipal agencies are well suited to small, detailed projects where they innovate new service approaches. In the first period, once the municipal agencies demonstrated that service was indeed possible, a small, low-status subgroup within the larger water and sewer agency applied these innovations on a city-wide level, having a much larger impact. The agency subgroup successfully turned agency policies around by concentrating on one simple task -- water service -- and directing community pressure at resistant implementation staff, thus pushing them to adopt new service policies. Pressure on the water and sewer agency from the state governor gave the subgroup authority to act within the agency, but their ability to carry out reforms depended on ongoing community mobilizations.

Community mobilizations were crucial in getting water and sewer services for previously-excluded communities, but were not sufficient by themselves to bring about institutional learning within the larger agency. Pressure from communities was channeled through the more receptive municipal agencies and agency subgroup, that in turn pressed the larger agency to improve service delivery. Thus, the pathways that community pressure takes to improving service delivery are circuitous. They reveal that small generalist agencies that are more sensitive to excluded communities' needs are better suited to developing service innovations, while larger, more specialized agencies can have a much greater impact once they begin to implement policy reforms. Yet these innovations and policy reforms could not occur without persistent pressure brought to bear through repeated waves of community mobilization.

Thesis Supervisor: Judith Tendler

CHAPTER ONE

INTRODUCTION

Despite a ten-year effort by the United Nations to eradicate water and sewer deprivation in developing countries by 1990,[1] many low-income groups continue to lack these services today. While 75% of the urban population in less developed countries has access to potable water, service is very uneven, varying widely among countries and between the rich and the poor within each city. In some countries only 25% of the urban population has water service. Sewer service reaches 90% of the urban population in developed countries, but only 40% in low-income countries (UNDP 1990:142, 143). Of those without services in developing-country cities, the vast majority are the poor, especially people living in squatter settlements and illegal subdivisions.[2]

Public infrastructure agencies generally resist serving the most marginal groups in urban areas -- the poor, the newly arrived, the illegal, the urban outcasts. In this study[3] I look at a case where previously-excluded groups gained tremendous improvements in urban services, and ask how this was possible. Between 1979 and 1991 in São Paulo, Brazil, water service to irregular settlements increased five fold and sewer service increased 15 fold (Toniolo, et.al. 1982, PMSP 1989). By 1987, almost 99% of all São Paulo favelas had water service, with 56.5% being served in their entirety (PMSP 1989). (See

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[1]The International Drinking Water Supply and Sanitation Decade ended in 1990.

[2]Aggregate figures on service to informal settlements are not readily available. Even a cursory review of donor and development-agency project literature and planning literature, however, overwhelmingly supports this assertion.

[3]The findings of this study are based on three months of field research in São Paulo, Brazil during the summer of 1991. Research was funded by the Inter-American Foundation, and the Carroll L. Wilson Awards committee.

Table 1) SABESP made parallel advances in service to illegal subdivisions over the same period, with most getting service in the early 1980's (Jacobi 1989).

Table One. PERCENT OF FAVELAS SERVED WITH WATER & SEWER SERVICE[4]

	1973	1980	1987
WATER	20.2	32.1	98.5
SEWER	00.7	00.6	15.4

Source: PMSP 1974, Taschner 1982, PMSP 1989.

This increase in service coincided with a wave of popular mobilizations for urban services in irregular settlements[5] in São Paulo, Brazil. Though these mobilizations were not solely responsible for transformations within government agencies, pressures from social mobilizations influenced the pace, timing, and nature of government policy and program initiatives. In this study I examine how communities direct demands at government service agencies, and how these agencies respond. In addition to community groups, I look at the role of outside agencies, politicians, and receptive subgroups within the service agency in bringing about better agency performance.

While both the economics and public policy literatures on infrastructure provision touch on the role of user pressures in improving service delivery, they do not explain how this might work. The first part of this introduction surveys the key arguments. I then turn

[4]Water and sewer service figures includes favelas that are served in full, and those with partial service. Partial service includes squatter settlements that are served with public standposts or a portion of residents have direct household water connections or sewer collection. In these cases, it can generally assumed that all residents have access to public drinking water, either by filling buckets at the standpost or at a neighbor's house, or as is more common today, by connecting a line to their neighbor's water connection, and paying the neighbor some portion of the water bill. Dissagregated data is not available on actual number of individual household connections in favelas.

[5]By "irregular," I refer to squatter settlements and illegal subdivisions, primarily self-built housing agglomerations that are not officially recognized as standard housing by municipal authorities or service providers. Ward (1981:385) calls settlements "irregular" where "residents squat on lands which belong to private landlords or to the [...] government, have bought [lots] illegally [...], or have entered into private purchase agreements with a landlord or real-estate developer who defaults on the adequate provision of services or on land registration." In the case of illegal subdivisions, I am only concerned with those that have water and sewer (and typically other) service deficits, and not with those that are illegal on strictly formal, legal grounds.

to the literature on social movements, which looks in depth at community organization, but does not deal well with the interaction between community groups and urban service agencies. Finally, I raise some questions that bring these two literatures together, and point to areas neither addresses adequately.

Infrastructure economists argue that the best way to make infrastructure delivery ·nt it to force public agencies to compete like private firms, thus getting them to le the highest quality service at the lowest possible cost. But market competition ı. ınisms cannot easily be brought to bear to improve water and sewer services. These services have considerable economies of scale and network effects, with new network extension depending on prior trunk network installation. Network effects also mean that it is inefficient to have competing water delivery and sewer collection systems because service to new areas is usually contingent upon previous service to other areas, making entry into the service provision market difficult, if not impossible.[6] Economies of scale and network effects are significant barriers to entry for competing firms, making water and sewer service largely monopolistic by nature.

The next best way to improve performance, infrastructure analysts argue, is to develop alternative mechanisms that can induce more efficient and responsive behavior. The literature highlights three main kinds of non-market pressures or "competition surrogates."[7] The first is direct user pressure, or "voice" as the public policy literature calls it,[8] where groups demand services, be it for initial service provision or improved maintenance and operation. The second kind of non-market pressure -- indirect pressure -- comes from outside agencies and politicians. This pressure often plays a significant role in demanding agency accountability, service extensions, or improved service quality. The third non-market pressure is internal to the service provider. Individuals or divisions

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[6]Although disagregated sewer collection and treatment is possible, in large urban areas this tends to lead to localized service deficiencies, even in industrialized countries.

[7]This discussion draws on Israel (1987).

[8]See especially Hirschman (1970) and Paul (1990).

within the agency often disagree about agency policies, responsibilities, and resource allocation. While the agency as a whole may not be responsive to unmet user needs, for example, there may be a subgroup within the agency that is, and that pushes for programs benefiting these people. All three forms of non-market pressure came in to play in the São Paulo case.

The infrastructure economics and public policy literatures, then, point to various ways non-market pressures might generate good behavior on the part of water and sewer service providers. Yet they do not discuss the form that these pressures should, can, or do take, or how pressures translate into improved service provision. The literature simply presents a typology of the possible channels through which non-market pressures might operate, without discussing how they actually work.

In order to understand how non-market pressures improved agency performance in São Paulo, a number of questions must be answered, none of which is easily addressed using the tools provided by the public policy or infrastructure economics literatures. What is voice? Much of the literature treats it as a management tool, but it is not. It is a messy category involving citizen mobilization, protest, political maneuvering, ideological discourse, and the like. In order to understand how demand-making works to improve services, we must first look at how communities formulate and make demands. The literature on new social movements (NSM) addresses how communities organize and press for their interests. The NSM analysts investigated urban social movements emerging in the late 1970's and early 1980's, and saw them as developing new forms of mobilizing that were internally democratic, autonomous from state and party manipulation, and capable of bringing about democratic transformations within the state.

Yet NSM analysts do not believe mobilizations for urban services such as water and sewer service can bring about real changes within government agencies because they die down once the immediate demands have been met. Urban service mobilizations never develop into larger pressure groups, they argue, but instead depend on favors from local

politicians to get benefits for individual neighborhoods. Therefore, the NSM literature argues, mobilizations for water and sewer bring limited, one-time victories, and create dependent relationships with local politicians.[9] Because the NSM literature believes that unless communities engage in autonomous confrontation with government they will not have any positive, long-term effect on policies, it judges cooperation and negotiation negatively. As a result, this literature also does not help substantially in pointing to how community interaction with service agencies can bring about better service. In addition, the NSM literature does not examine the role of women in urban service struggles, though women make up approximately 80% of mobilization activists (Rede Mulher n.d.).[10]

While neither the public policy literature on non-market pressures, nor the new social movement literature seem to fully explain how community mobilizations can interact with public service agencies to improve performance, they provide a starting point for this investigation. There are some further questions that must be answered in order to fill the gap between the two literatures. If urban service mobilizations recede once service has been provided, how do we explain the dramatic increase in water and sewer service in São Paulo? Is there indeed some continuity in urban service struggles, and if so, what role do women play in this, given their majority participation? What channels do demands take in reaching the target agency? What makes outside agencies and politicians put pressure on non-responsive agencies? This study suggests that indirect pressures are influenced by user demands, but the literature does not describe this link, as if the two forces operated independently. How do service providers learn to "feel" and respond to demands when they had not done so previously? What enables subgroups to bring about reforms within resistant agencies?

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[9]There is now a growing body of literature that looks at social movements in a much less bi-polar light. See especially Cardoso (1989a, 1989b), Boschi (1984), Doimo (1984, 1990), Sader (1988), and Jacobi (1985, 1989).

[10]There is an extensive literature on gender and women's participation in social mobilizations which the NSM has largely ignored. See especially Bookman and Morgen (1988), Posel (1991), Moore (1990), Scott (1989) Moser (1989), Moser and Peak (1987), Fraser (1989), and Hart (1990).

This study examines how pressures from users, outside agencies and politicians, and internal agency subgroups combine to provide effective motivation for improving water and sewer service. I have chosen the São Paulo case because of the marked improvement in water and sewer service to irregular settlements, which account for approximately 43% of the city's total developed area.[11] In São Paulo, active community mobilizations for water and sewer service forced public agencies to change policies, develop specialized service programs, and innovate new construction practices for irregular settlements. The São Paulo case is significant because these reforms occurred in the largest metropolitan area south of Mexico city during a period of fiscal austerity. The obstacles to improved service provision are common to other cases, though perhaps more daunting in the São Paulo case.

Chapter Two describes the reasons agencies are reluctant to serve some urban residents, specifically squatter settlements and illegal subdivisions. Chapter Three looks at the way these communities make demands on service providers, and how the quality of their demands has changed over a twelve-year period from 1979 to 1991. Chapter Four then turns to the agencies themselves, examining how user demands are felt by the agencies, and how external pressure from outside agencies and politicians, and internal pressure from agency subgroups increase agency responsiveness. In the concluding chapter I bring the findings from Chapters Three and Four together to examine how the three kinds of non-market pressures interact with each other, and work to push agencies to perform better.

Methodology

This study is based on three months of field work in São Paulo, Brazil between June and September of 1991. During this period I interviewed public agency staff, community activists, advisors, and mobilization participants. I reviewed past agency

[11]Based on PMSP estimates of illegal subdivisions occupying 35% of urban area (PMSP n.d.), and HABI estimates of favelas occupying 8% (PMSP 1989).

policies, and observed current water and sewer extension projects. My findings are supplemented by impressions gained from participant observation at housing and urban service movement meetings and rallies, and some comparative research in an adjacent municipality, Santo Andre.

My findings on community mobilizations are based on extensive interviews with community residents in three São Paulo neighborhoods, and I have not compiled complete case studies of each neighborhood. Rather, I draw on interviews and observations to make comparisons among the neighborhoods, and then make generalizations from patterns observed in all three. Though the three neighborhoods are quite different, they are all cases where active community mobilization has achieved significant gains. I purposefully focused on "success stories" in order to see what form community mobilization takes when it is effective. Nossa Senhora Apparecida is a well-established favela, Jardim Damasceno is a former illegal subdivision, and Vila Arco Iris is a self-built subdivision organized and managed by former favela residents. (See Appendix One for full descriptions.) Despite these differences, interviews and observations revealed striking similarities in community strategies for demanding services and interacting with agencies. Rather than focusing on significant variations among the three cases -- though there are some -- this study highlights the common trends in water and sewer struggles in these distinct settings. The findings generally come from the three specific cases, but at times are drawn from many interviews with movement participants, leaders, advisors, church workers, agency staff, and administrators, rather than one specific case.

My findings on government agencies draw on interviews with past and present administrators and technicians at the São Paulo State Water and Sewer Company, SABESP, which is the principal service provider. In addition to SABESP, I interviewed program implementation staff from a number of municipal agencies that are or have been active in providing services to previously-excluded groups. These include the Municipal Secretariat of Housing's Popular Housing Division (HABI), the Municipal Development

agency (EMURB), and the Bureau of Social Welfare (COBES). I reviewed planning documents about the neighborhoods studied, when available, and about city-wide service policies from SABESP, HABI, EMURB, and COBES.

This research is based on a review of the literature on urban housing, social movements, physical infrastructure provision, infrastructure economics and public policy, and gender. The initial impetus for this study comes from contact I had in 1985 with community groups in southern São Paulo involved in struggles for day care, health clinics, and urban infrastructure services. I became acquainted with these groups during a year and a half period between June of 1985 and December of 1986 when I was a student at the University of São Paulo.

CHAPTER TWO

SERVICE PROVISION IN SÃO PAULO

Water and sewer service to squatter settlements -- or favelas[12] -- and illegal subdivisions[13] lags behind service to standard urban neighborhoods for political, legal, technical, and institutional reasons. Neighborhoods without service first have to convince the service provider to extend water and sewer lines to their community. Agencies resists extending service because this legitimizes the illegal or irregular land occupation, and often contradicts public policies to remove squatters. But if neighborhoods press hard enough, agencies sometimes reluctantly do provide service, thus implicitly acknowledging that irregular settlements are no longer transitional housing solutions for new urban immigrants, but permanent settlements housing the city's new and native residents, both low- and middle-income residents alike. Once the agency agrees to provide service, it confronts difficult technical problems. Irregular settlements have narrow, winding walkways instead of streets. Houses are bunched together on steep hillsides or down in ravines. Many settlements are subject to annual flooding and severe soil erosion.

Prior to 1979, the São Paulo State Water and Sewer Company, SABESP, resisted serving favelas and illegal subdivisions. When these communities were served, it was

[12]Favela is the Brazilian term generally used interchangeably with squatter settlements. Favelas are illegal land occupations that can be planned or unplanned, and that have a heterogeneous mix of housing types, from shacks built out of scrap materials to brick and cinder block two-story houses. Households in favelas are generally self-built by the resident, but there is also a significant percentage of houses that are purchased from the original builder (43%), or rented or loaned to family members (15%) (Taschner 1982).

[13]Subdivision here refers to neighborhoods that are developed by a private developer. Regulations require that the developer provide water, sewer, electricity, street paving, and any other basic infrastructure needed to insure the physical stability of the neighborhood, such as retention walls, drainage ditches, etc. If the subdivision is not serviced, it is illegal in the eyes of the municipality. In the classic illegal subdivision, the developer simply draws lot lines, and provides no services (Guedes 1991, Fujimoto, personal interview 1991). It is possible that a subdivision could be considered legal, although it lacks services, if it was built before 1967, when subdivision laws changed to require developers to provide basic infrastructure. The number of subdivisions that fall within this category is insignificant in the São Paulo case.

through municipal entities such as the Secretariat of Housing (SEHAB), or the Bureau of Social Welfare (COBES), often as a result of the direct intervention of politicians (SABESP n.d.).[14] While neither of these agencies normally provide infrastructure, they could contract construction services out to the municipal Development Agency (EMURB), or to a private firm. Even in these cases communities were served primarily with communal standposts, and in an isolated, limited, and haphazard fashion. None of these agencies provided sewerage. SABESP based its resistance to serving these communities for legal, technical and institutional grounds. The following discussion includes both past and present impediments to service, but generally tries to characterize SABESP's position towards irregular settlements before 1979.

This chapter lays out the conditions that make service to favelas and illegal subdivisions difficult. First, I characterize irregular settlements. Next I discuss the political context leading up to the wave of water and sewer mobilizations that began in the late 1970's, and changes in agency policies towards informal settlements. I then look at the institutional, legal, and technical barriers to service provision. This provides the backdrop to the following two chapters, which show how neighborhoods mobilize to get services and how agencies then respond.

Irregular Settlements

Favelas and illegal subdivisions share a number of characteristics, though they are differentiated by their legal standing and their form of occupation. Both stand outside normal legal requirements for residential land use, and often have very similar physical appearances. The differences between them are sometimes just a matter of degree. Whereas favelas are illegal occupations of private or public lands, illegal subdivisions result from what the resident perceives as a legitimate purchase of a parcel of land from its owner

[14]Carlos Antonio Mingrone, former coordinator of Pro-Favela for EMURB (1979-1983), personal interview, 3 September, 1991, São Paulo, Brazil.

or developer. The subdivision residents have some basis for a legal claim to their parcels, because they actually paid for them. The parcel, however, may not be legal because the subdivision itself does not conform to the municipality's zoning, building, or infrastructure requirements. Many illegal subdivisions have the same physical characteristics as favelas because the seller has failed to comply with requirements for providing urban services such as paved streets, water and sewer lines, and street lighting. The magnitude of this problem is significant. In São Paulo, for instance, illegal subdivisions accounted for 35% of the total developed urban land area in 1981 (PMSP n.d.). When the subdivider defaults on his responsibilities to provide basic services, the residents face the same barriers squatters do to obtaining services. For this reason, I often discuss favelas and illegal subdivisions together, though it should be understood that I am referring only to those illegal subdivisions that have service deficits.

The Political Context

The politics of government policies towards illegal settlements are treated extensively in the planning and social movement literature.[15] This study does not focus directly on the politics surrounding illegal settlements, except to the extent that they influence changes in service provision. A general overview of the political context, however, helps to frame the discussion.

In 1964, the Brazilian military took over an elected government in a coup, inaugurating 21 years of authoritarian rule. Unlike other military regimes in Latin America, the Brazilian military permitted some limited elections -- mostly at the municipal level. The military suspended the right of *habeas corpus,* freedom of the press, freedom of assembly, and organization of political parties -- except for the two "official" parties. Brazilian security forces tortured and killed political opponents, selectively targeting leaders and activists in opposition groups. The period covered in this study, 1979 to the present,

[15]A good overview is provided in Hardoy and Satterthwaite (1987).

coincides with a period of gradual, though substantial, political liberalization in Brazil, culminating in a return to civilian rule in 1985. The *abertura* process, or political opening, was initiated from within the military government in the mid 1970's, but was pushed forward by increasingly active popular mobilization and opposition party activists. The military began to permit citizens to voice grievances, organize in unions, and protest for increased political and civil rights. As the liberalization process progressed, the government responded to, and became more influenced by, mass mobilizations for better conditions for the poor, and for a return to democracy.[16] Political liberalization allowed civilians to voice demands and criticisms without fearing government reprisals, and provided progressive politicians and bureaucrats within government with more latitude for responding to these demands. This two-way interaction between opening from above, and growing participation from below contributed to making public agencies, including SABESP, responsive to unmet user needs in a way that had not been possible during the more repressive phase of the military regime. While user pressure may increase service delivery and service quality, it will not be forthcoming if citizens cannot exercise their rights to protest and petition government. Much of the infrastructure and economics literature ignores these dynamics when stressing the role of user pressure and "voice" in improving services.

By 1979, mass labor mobilizations and neighborhood-based struggles demanding better living conditions erupted within large urban centers, first in São Paulo, and then throughout Brazil. The cost-of-living movement was the most visible of the neighborhood-based struggles because its organization reached national proportions.[17] Struggles for urban services such as water, sewer, electricity, pavement, trash collection, health centers, and schools rarely attained the same degree of unity and strength. They tended to be more

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[16]For two good discussions of this process, see Stepan (1989) and Alves (1985).

[17]The cost-of-living movement was a housewife-led struggle for price freezes on essential goods, inflation-tied salary adjustments, day care centers for working mothers, and food distribution centers (Alvarez 1990: 84-85).

localized, at most reaching the city-wide level (Evers, Muller-Plantenberg, and Spessart 1983). Nevertheless, these smaller struggles added significantly to the process of improving service provision to previously unserved populations (Jacobi 1989).

But it was not pressure from excluded communities alone that brought improved services. The military government's gradual liberalization also contributed to the improvement. As elections became more open and competitive, elected officials became more dependent on citizen's votes, and therefore more responsive to their interests. Elected officials -- first mayors, and later governors -- established programs to address their constituents' needs. This gave reformist bureaucrats within public agencies, previously circumscribed by repressive or simply non-responsive official policy, an opportunity to initiate reforms that had been impossible during the height of the military regime. They could not, however, act alone because their capacity to implement reforms depended largely on active mobilization and demand-making by citizens. Pressure from community mobilizations justified and validated reformists' activities within the agencies.

In São Paulo, groups of community members arrived at SABESP's doorsteps banging empty buckets and carrying samples of the contaminated ground water they were forced to drink because they had no piped water. Neighborhood associations organized petitions, demonstrations, sit-ins, and protests of all sorts to pressure SABESP to extend services. They often enlisted the aid of health workers, church lay-workers and sympathetic priests, local political representatives, volunteer lawyers, women's organizations, and other non-governmental voluntary organizations. These mobilizations put constant pressure on the resistant SABESP to provide services to unserved communities.

The height of neighborhood mobilizations for service extensions to favelas and illegal subdivisions came between 1979 and 1985. By the end of that period SABESP had almost completely reversed its earlier policy not to serve favelas and illegal subdivisions, and had delivered water to most previously-excluded communities. Major gains were also

made in sewer service, though it lagged far behind. This also related to user pressure: it was a less pressing need from the residents' perspective, because individual -- though unsanitary -- solutions are available, as detailed below. Though some neighborhoods did see sewer as a significant need, and successfully mobilized for service, most did not. The result is a significant gap in the level of service between water and sewer.

The Institutional Context

SABESP is a highly prestigious water and sewer company. It was created in 1973 under a federal program to replace municipal water and sewer agencies with semi-autonomous, self-financing state companies. SABESP has a concessionary service contract with the capital city of São Paulo, and with the majority of municipalities throughout the state. SABESP's access to financial resources and state-wide jurisdiction enables it to perform on a level individual municipalities generally cannot. It has built large scale water and sewer projects that no municipal agency could finance or manage. It sells bulk water to municipalities that operate their own networks. SABESP serves most municipalities of metropolitan São Paulo, the largest Latin American metropolitan area south of Mexico City, with 16 million inhabitants. There is a strong sense within the company that "SABESP knows best." Its technical standards are the highest in Brazil, and its engineers resist lowering them or deviating from established time tables and construction procedures in order to meet unplanned increases in service demand.[18,19]

Engineers and infrastructure planners like high standards because they ensure that the network will not break down as soon as it is installed. But while high standards increase the quality of service, and reduce the need for repairs, they also limit the number

[18]Engineer Nelson Luiz Rodrigues Nucci, former Director of SABESP (1986), personal interview, 22 July, 1991, São Paulo; and Eduardo Marques, Sanitary Engineer, HABI/SEHAB, personal interview, 1 August, 1991, São Paulo.

[19]I do not include an analysis of the specific organizational structure of SABESP except where necessary to convey relationships among actors. The precise organizational make-up of the agency is less relevant than the pathways for pressure and response.

of people served. This is the result not only of budget constraints, but also because high service standards are designed for consolidated urban areas, and not the chaotic land use patterns of irregular settlements. Most sanitation infrastructure cannot be installed in irregular settlements without modifying construction practices and using different materials. High-quality equipment (high-quality water and sewer lines), generous design specifications (larger sewer pipes to avoid clogging), and rigorous construction procedures (only installing networks on paved, reinforced streets) all insure that the equipment will function well with little or no maintenance. In informal settlements, in contrast, the terrain and the street layout often preclude using standard equipment and practices, making the task more difficult, and increasing future maintenance needs.

It is easier to get a budget for building new infrastructure than for paying a large staff to do maintenance work. Even when infrastructure planners have enough funding for maintenance today, then, they cannot count on having it down the road. In either case, infrastructure planners often like to invest in higher quality systems that will not require much maintenance (Gakenheimer and Brando 1987). Yet high standards and rigorous construction practices preclude servicing most irregular settlements, often a significant proportion of urban housing. SABESP Infrastructure planners' and engineers' bias in favor of high technical standards, and against operation and maintenance, places irregular settlements low on the agency's priority list.

This bias not withstanding, the technical difficulties in serving irregular settlements are significant. Both the technical and the legal obstacles to service outlined below make SABESP implementing staff reluctant to serve favelas and illegal subdivisions. SABESP is staffed predominantly by engineers, with district administrative and technical staff carrying out network extensions and performing maintenance operations; there are a small number of economists and planners at the central agency level. High standards appeal to the district field staff because they want to keep their maintenance responsibilities down. Uniformity in the type of service, moreover, reduces the need for discretion, and hence

uncertainty. Rather than developing individualized technical solutions for each neighborhood, district operations staff can point to SABESP's standards, and simply refuse to serve the neighborhood until it meets the basic minimum urban design requirements.

Individualized solutions require a qualitatively different form of interaction with beneficiaries. SABESP is neither staffed nor organized to carry out the kinds of extensive negotiations with and between residents required to overcome the legal and technical constraints outlined above. Entering a community, and resolving each technical problem individually -- getting residents to agree to cede parts of their lots to widen a road, or to allow a sewer line to pass by -- is difficult and complex. District operations staff are often under conflicting pressures in serving these settlements. On the one hand, operations staff are supposed to execute network extensions that conform to agency standards. On the other hand, they may be under tremendous pressure from neighborhood groups to provide service to their community. In an effort to reduce pressure for service from local communities, district staff tend to be rude and uncompromising, thus intimidating local residents out of making demands (Lipsky 1982).[20]

There were some isolated exceptions to SABESP's refusal to serve favelas and illegal subdivisions prior to 1979. Whenever SABESP changed its stance towards favelas and illegal settlements it sent conflicting instructions to the district staff, exacerbating their confusion. For instance, central agency administrators sometimes agreed to serve a particular community because they were pressured by an influential politician. They instructed district staff to execute the network extension, sending a mixed message: serve this community, but do not serve the others. As a result, district staff developed hostility toward irregular settlement residents, because they had become an unpredictable source of additional work.

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[20]Wanderlei Assumpção Dias, Department head for Cadastral and Bill collection, occasional negotiator for SABESP at meetings with neighborhood groups, personal interview, 25 July, 1991. São Paulo.

Legal Constraints

SABESP administrators and engineers cited a number of legal reasons why they should not serve irregular settlements. Extending public services constitutes a form of legitimization of urban land occupation. Because favelas and illegal subdivisions are extralegal land occupations, SABESP argued that service should not be provided unless the land occupation was regularized through legal processes, or without authorization from the municipality. If the municipality authorized service to an irregular settlement, the municipality would take responsibility of legitimizing the land occupation, and not SABESP.[21]

SABESP's concessionary contract with the municipality mandates it to provide water and sewer service to public, or official, streets. SABESP has an obligation to provide service on streets that conform to the municipality's design criteria for width, paving, gutters, and load capacity -- i.e. those with official status. Pathways and streets within irregular settlements usually do not meet these requirements, and therefore lack official status (SABESP n.d.).[22] This is the case in all favelas, and in those illegal subdivisions where the developer has defaulted on service provision obligations. Therefore, SABESP does not have a legal obligation to serve these communities.

Favelas typically have an extremely high number of households per unit of land, and residences are located according to available space rather than any criteria for order or proximity to streets. House locations, therefore, tend to be chaotic, from an urban design standpoint. Favela households are often located up to ten houses away from the nearest street or pathway.[23] In order to get service, houses in the interior of a favela have to get

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[21]Engineer Nelson Luiz Rodrigues Nucci, former Director of SABESP (1986), personal interview, 22 July, 1991, São Paulo; and Jose Julio Fernandez, Department Chief, Eastern Zone, SABESP, personal interview, 16 July, 1991, São Paulo.

[22]Ricardo Guilherme Araujo, former coordinator of SABESP Favela program (1983-1985), personal interview, 4 August, 1991, São Paulo.

[23]This is a function of the size of the favela, its density, the form in which land occupation took place, and the level of organization within the favela that can sometimes serve restrict newcomers from

permission from all the neighbors through whose lots the water and sewer lines would pass. This is less common in illegal subdivisions because the developer will typically draw out streets and lot areas, even if he installs no pavement, sidewalks, gutters, water, sewer, or street lighting. When illegal subdivisions are on hilly terrain, however, sewer lines from houses located below street level must pass through the down-hill neighbor's lot in order to connect to the collection line, since sewage flows by gravity. This is not uncommon, because the least equipped subdivisions also tend to be located on the worst lands--extremely hilly or unstable, close to the water table, adjacent to or in flood-prone areas, and the like, as described below. In both cases, this requires securing an easement agreement, or obtaining informal permission from neighbors, which can be a very time consuming task. SABESP mainly has engineers and technicians on its operations staff, and no personnel specializing in gaining permission to pass through private residential properties. This kind of task is, therefore, beyond the administrative capacity of the agency. This means that in many cases SABESP will not serve residences for lack of administrative capacity to obtain the legal -- or informal -- agreements from residents.

Technical Constraints

Because they are restricted to the areas that no one else has seen fit to develop, favelas and illegal subdivisions tend to be located on the most marginal lands within the city. Data on favelas from 1987 show a significant portion are located in high risk areas, with 49% along waterways, 32% in flood-prone areas, 29% on steep hillsides, 3% along major throughways, and roughly 4% on top of landfills and along public rights-of-way where residential development is restricted, such as electrical transmission lines or railways

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locating in unclaimed spaces. The largest favela in São Paulo has less than 1,500 units in 1980, and the average favela having 97 households (Censo Demographic 1980:163-167 and Taschner 1982:301).

(PMSP n.d.:104). The situation of illegal subdivisions is much more varied, though examples of excessive slope, unstable soils, and flooding are common.[24]

Steep inclines create technical difficulties for sanitation infrastructure, and for sewerage in particular. Sewer lines are highly subject to blockages wherever slope changes. In hilly neighborhoods, sewer lines must follow the contours of the terrain, dropping steeply, and then leveling off at the bottom of a hill, or they must turn to follow a street that winds around the hill. Each change in incline requires a manhole to permit unblocking. Hilly terrain also increases the need for routine cleaning and other general maintenance.[25] But network maintenance activities are typically a low priority for water and sewer companies as explained above. They are low-prestige activities when compared to performing major network extensions or building water and sewer treatment facilities, and they require more on-hand personnel just for maintenance. As a result, SABESP district offices tend not to do routine cleaning and maintenance tasks.[26] All of this means that SABESP district operations staff are reluctant to install sewer networks in favelas and illegal subdivisions, because either they will need more staff just for maintenance and operation, or their overall work load will increase.

Narrow, winding streets also create problems for standard service provision in São Paulo, because the trucks used to bring in trenching and sewer clearing machinery cannot easily maneuver on them. As a result, service agencies impose minimum street width requirements for service. In 1979 the narrowest street that SABESP served was four

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[24]For example, one of the communities investigated during this study, Jardim Damasceno, is a notorious case of an illegal subdivision where steep incline, weak soils, flood-prone areas, and risks associated with waterways combined with an absence of urban infrastructure to make living conditions comparable to if not worse than many favelas, in its initial stages of development. Nelson Fujimoto, Risk analyst with Municipal Popular Housing Unit, personal interview, 21 August, 1991, São Paulo; Pedro Jacobi, researcher, personal interview, June, 1991, São Paulo.

[25]Engenheiro Arnaldo Boa Sorte de Oliveira, Coordinator of Operations and Maintenance for SABESP District Office in Freguesia de O, personal interview, 14 August, 1991, São Paulo.

[26]Gakenheimer and Brando (1987). This was confirmed by numerous informants, notably a community organizer from Jardim Damasceno, who reported that clearing is performed upon request only, and even then, it usually only is done when a politician is asked to visit the neighborhood to look at the state of the sewer system. Community activist, personal interview, 14 August, 1991, Jardim Damasceno, São Paulo.

meters wide. The streets of most favelas are narrower than this; many access routes are just footpaths, no more than one or two meters wide. Consequently, SABESP considered it impossible to serve favelas, except along their edges, where houses abut official public streets.

Street widths in favelas and illegal subdivisions may be sufficient to allow for truck access, except for a short span where few lots that jut into the street. In this case, service could be provided if the intruding lots were reconfigured by reducing a yard, moving a wall over a few meters, or removing part of the house and rebuilding it at the rear of the lot. In some cases the entire house would have to be removed and relocated. This, in turn, requires extensive negotiation with the residents. As with sewer pass-throughs, this is a task that engineers and technicians are not trained for, and they generally do not like to do it. Therefore, even if there is only one household that causes the street to narrow in one section, SABESP engineers deem the entire street unserviceable.

Lots with no street frontage present the same difficulties that narrow streets do -- trenching and maintenance equipment cannot enter. The only difference is in the magnitude of the problem. In illegal subdivisions few households are be deemed "unserviceable" because they lack street frontage, since subdivisions tend to have more standards street layouts. In favelas, however, a substantial majority of the houses may be unserviceable by standard technologies and practices.

Engineers prefer to install water and sewer lines in neighborhoods that either already have pavement, are protected from erosion by retention walls, or will have such walls built immediately after network installation. Streets without asphalt and hillsides without retention walls are susceptible to soil erosion, exposing water and sewer lines to vehicle traffic. Water lines, and to a greater extent, sewer lines that are laid in areas prone to erosion and washing out, are at great risk of developing leaks and breaking. Water lines, which function under pressure and have strong joints built to withstand this pressure, can stand up to a certain amount of exposure, as long as there is no vehicle traffic over the

exposed portions. Sewer lines, however, need to be buried deeply and have a solid foundation to protect them from shifting. They are typically constructed using short pieces of pipe, made from cast iron or ceramics, and are simply laid into place with little or no fixed bonding between the sections. Any soil settling or erosion will move the sections, opening spaces where roots and debris can get into the pipes, storm water can enter, and sewage can escape. Roots and debris clog sewer lines, backing up the sewage. Storm water infiltrating into sewer lines can exceed the network's design capacity -- the specific diameter needed to carry the expected flow -- causing the line to backup during intense rains. Sewage seepage from lines contaminates local ground water and can threaten the drinking water supply.[27]

Agency staff are afraid that serving these communities will increase their maintenance responsibilities because residents don't know how to use the network. Sanitary engineers say that residents in these communities put solid wastes into the sewer, mistakenly assuming that they will be washed away with the sewer water. Agency staff have found articles ranging from cans, bottles, and other forms of domestic solid wastes, to larger materials such as construction rubble and mattresses. Residents lift manhole covers and deposit wastes, and hope the water will flush them away, according to agency staff. Others argue that solid waste collection in these communities is inadequate, leading residents to dispose of solid wastes in any way they can. While there are no quantitative data confirming agency staff perceptions that network abuse is more common in favelas and illegal subdivisions than in other types of neighborhoods, agency staff commonly cite this as a reason why sewer service is not viable in irregular settlements.[28]

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[27]If the unserviced area is located in the catchment basin for a drinking water source, sewage contamination of groundwater will increase water treatment costs. Localized water contamination is a problem where residents rely on self-built wells, as was the case in São Paulo until the early 1980's, or if local water lines have holes, and negative pressure develops in the pipes. Negative pressure, or suction that pulls water into the pipes, results when there is insufficient pressure in the system. This causes contaminated ground water to seep into water lines, polluting the water supply.

[28]The incidence of telephone vandalism in Rio de Janeiro, for example, is lower in favelas than it is in more wealthy neighborhoods. Missing and broken street lights, however, are more common along access routes within favelas than in other areas of the city. (Telerj, and Rio Luz, as cited in Folha de São

Though this description of the constraints on service to favelas and illegal subdivisions is rather grim, significant improvements in service provision occurred between 1979 and 1991. Indeed, given these difficulties and obstacles, one would thing that service would never be provided to favelas and illegal subdivisions. But a combination of community pressure and agency initiatives greatly increased both water and sewer service to these communities. In the following two chapters I show how neighborhoods mobilized to get services, and how SABESP and other municipal agencies responded.

Paulo, "Favelas do Rio destroem menos orelhões que bairros da zona sul," 10/6/91, p.4-3.) This anecdotal evidence indicates that infrastructure abuse is not necessarily related to the type of residential area or income level, but involves more complex factors.

CHAPTER THREE

COMMUNITY PRESSURE

The remarkable increase in water and sewer service between 1979 and 1985 coincided with a wave of popular mobilizations for urban services that emerged with the gradual democratization process in Brazil. Though these mobilizations were not solely responsible for transformations within SABESP, the pace, timing, and nature of policy and program initiatives were influenced by them. In order to understand how this might be possible, I looked at mobilizations in three neighborhoods in São Paulo that have been active in demanding water and sewer services. (See Appendix One for a description of the three). I wanted to know how they had achieved their victories, and whether their past struggles had influenced how they voice their interests today. How do these communities formulate and direct demands? Who do they direct their demands at? How does the majority presence of women shape community mobilizations? Do communities go on to new struggles once the initial demands are met? Have they learned from past struggles? This chapter attempts to answer these questions.

Urban Service Mobilizations

Although the new social movement (NSM) literature discusses neighborhood association mobilizations for services, this literature does not explain their interaction with public agencies. Social movements emerging with the return to democracy in Latin America have a level of autonomy, genuine spontaneity, and internal democratic structure not seen during earlier populist or military periods, according to the NSM literature (Alvarez 1989, Boschi 1984, Mainwaring 1989). This literature predicted these new movements would develop into a force for social change and democratic transition within

society. As social movements matured, they would grow, developing broader coalitions with other excluded groups, taking on new and increasingly political issues (Evers et.al. 1983, Munck 1991, Kowarick and Bonduki 1988). Movements for urban services, however, have not lived up to this expectation, tending to dissipate once their immediate substantive demands have been met (Evers et.al. 1983, Alvarez 1989). NSM analysts attribute this failure to the atomistic, neighborhood-by-neighborhood nature of urban service struggles and victories -- (precisely the kind of pattern that agencies dislike, but for totally different reasons.) This prevents organized communities from forming larger pressure groups, or from moving beyond the specific focus of their demands to more strategic struggles for democracy, civil rights, electoral reforms, and the like. NSM analysts also criticize urban service movements' reliance on local politicians to lobby for neighborhood needs. Mobilizations for urban services, they argue, bring limited, one-time victories, and create dependent relationships with local politicians and service providers. Implicit in this critique of urban service movements are the assumptions that (1) a retreat from active mobilization is equivalent to non-engagement with the state, hence there is no impact on public policies; and (2) unless demands are explicitly political -- such as movements for direct citizen control over agency expenditures and policies -- they do not have a transformative capacity.

My analysis of mobilizations for water and sewer service in São Paulo shows these assumptions to be incorrect. Water and sewer struggles in São Paulo have come in waves of active mobilization followed by periods of less visible activity, yet there is considerable continuity of both leadership and community participation from one struggle to the next. Rather than a retreat into complacency, each wave of protest develops neighborhoods' protest skills and strategies. Women play a significant role in leadership continuity and cumulative learning through their ongoing involvement in both the periods of active mobilization and the everyday business of community affairs. Lessons learned from water mobilizations both build from, and spill over into other substantive and strategic

mobilizations.[29] This has occurred even though struggles for water and sewer service never developed into a fully city-wide, much less national, movement. Rather, neighborhood associations periodically have developed informal district-level networks, learning from one another's successful strategies and occasionally mounting joint campaigns. The associations were able to gain significant victories without forming formal movement federations. Through their successive struggles, neighborhood associations have learned to place strategic pressures on public agencies with overlapping responsibilities, leading to substantial improvements in service delivery. Neighborhood associations have progressed from strictly protest and demand-based strategies to negotiation and a limited participation in service extension tasks, as I show in this chapter. Rather than representing limited, one-time struggles, as the NSM literature argues, these discrete waves of mobilization add up to increased demand-making capacity, more effective demand articulation, and a transformation in communities' relationship with government.

Neighborhood Associations

Neighborhood associations are at the heart of user pressure for improved services in all but the most individual requests for service to the service providers.[30] They bring individual residents together around common goals, formulate specific demands based on those goals, organize community-wide mobilizations, and function as the community's spokespersons with the agency. Organizing collectively to make demands for services is the only way to pressure an agency when all or most of the neighborhood lacks service. Collective mobilization is difficult when individual solutions for water and sewer are available, since these are often the easiest way for people to get service. For example, favela residents who live next to houses with official water connections can "borrow" water from their neighbors by connecting a line to their source, and paying the neighbor some

[29]These findings are similar to earlier works by Tarrow (1983) and Hirschman (1963).

[30]The term "service provider" is used here instead of SABESP, because other agencies also provide service and are the target of neighborhood association demands.

portion of the water bill.[31] Another way to get water on an individual basis is to petition SABESP individually. This only works if residents are next to an existing line that can be easily extended, and if there are no other reasons for denying service, such as illegal or contested land tenure. Yet in most cases the entire illegal subdivision or favela lacks service, or service is available to only some residents, and individual demands cannot resolve the problem.

Community-wide participation in sewerage struggles is less common than in the case of water struggles. Individual households give low priority to sewerage because they can easily run an outlet line from the house to the nearest gully or storm drain, or use self-built pit latrines. Also, sewerage doubles the bill from SABESP. From the individual householder's perspective, then, there is little incentive to demand sewer service. Lack of sewer service is a serious problem for the community, however, because it creates health problems. One household's waste ends up in another's yard, runs along the side of streets, in streams, and down open storm drains. Children play in these contaminated waterways, and the waterways back up as they become clogged with fecal matter and other wastes disposed of through toilets that discharge into open ditches. These consequences affect individual households unevenly, and rarely stimulate spontaneous consensus that the community as a whole needs sewer service.

In the case of both water and sewer service, neighborhood associations are able to articulate effectively an interest that is either ignored by SABESP when individuals make demands, or is not present at all at the individual level. To the agency, the association's demand can represent a threat -- a large, organized group of angry citizens knocking at their door -- or an opportunity to resolve difficult service problems. It may turn out to be easier to deal with the leaders of the neighborhood association rather than many individual

[31]This can create tension among neighbors because the household with the official connection often charges more than their neighbors' actual share of the cost.

residents. Not only are neighborhood associations able to bring the community together around common interests, then, but they facilitate interaction with government agencies.

Neighborhood associations are made up of a small core group of community organizers -- typically a half-dozen or so individuals. These activists structure demand-making strategies, choose which demands to press at any given moment, engage in contact with service and regulatory agencies, and mobilize community involvement. Though community leadership shifts somewhat over time, there is still a high degree of continuity, with most members having been involved since the mid- to late- 1970's. In all three of the communities studied, activists had been involved directly in water and sewer struggles for over five years, and in some form of community activity or mobilization -- around land tenure issues, health care, electricity, trash collection, and literacy -- for over ten years. The community activists studied all had some previous experiences with labor unions, church-based literacy courses, youth activities, consciousness-raising groups, mother's clubs, feminist organizations, and other local and regional protest movements, such as the cost-of-living movement of the late 1970's. Through these experiences activists have learned about agency structures, technical issues related to project implementation, and have identified receptive individuals within agencies. This knowledge enables the activists to direct mass community protests at the most sensitive agencies or exert pressure on key individuals, increasing the likelihood of mobilization success.

Neighborhood associations play a central role in bringing the community together to make demands on service providers. Demand-making typically means bringing large numbers of neighborhood residents to agency doorsteps to bang pots and pans, deliver petitions, stage sit-ins, or demand meetings for agency representatives to see at first hand how people are living. In order for this to be effective, the neighborhood association needs to mobilize enough residents to impress agency staff with the magnitude of their discontent. Jardim Damasceno activists filled 13 buses with residents, and went to SABESP

headquarters in 1982 to demand sewer service.[32] Nossa Senhora Aparecida leaders brought busloads of residents to the municipal housing office in 1989 to get a major neighborhood recuperation project for the community.[33] In Vila Arco Iris, community leaders organized an eight-day and nine-night sit-in in the center of the city to get the right to build their houses on state-owned land.[34] In all these cases, the communities succeeded in getting government agencies to respond to their demands. While this is not always how the community leaders go about pressing demands, the threat of mass protests increases their bargaining power with the agencies.

Members of the community often disagree about mobilization strategies and priorities. Some may prefer to seek individual solutions. Some rank water, and particularly sewer, low on their list of priorities. Others may not have the time or energy to participate on a constant basis in community mobilizations. Or, there may be a rival group which vies for control of residents' allegiance, and credit for mobilization victories.[35] Despite this, the neighborhood association needs to get a significant part of the community to go along because of the need for large numbers in doing "battle" with the service provider. Neighborhood associations used a number of strategies for this. In Jardim Damasceno, community organizers got 50 residents to go to SABESP headquarters to complain about high water bills due to high pressures and leaking pipes. With no initial response from the agency, the organizers got together another group of 50, but this time mostly of different residents. "We try to keep a rotating shift of people to go to SABESP, so that they're always involved, but also to keep people from getting tired of the struggle."[36] Sustaining community interest is hardest when the agency doesn't respond right away. "We use a small commission [to negotiate with SABESP] because of the wear

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[32]Community activist, personal interview, 14 August, 1991, Jardim Damasceno, São Paulo.

[33]Community activist, personal interview, 9 July, 1991, Nossa Senhora Aparecida, São Paulo.

[34]Community activist, personal interview, 5 September, 1991, Vila Arco Iris, São Paulo.

[35]I do not address this issue in this study, though it is significant. Because I lack longitudinal data, I have largely limited myself to describing current neighborhood associations. Cardoso (1989) presents an excellent discussion of this issue.

[36]Community activist, personal interview, 30 August, 1991, Jardim Damasceno, São Paulo.

-- SABESP keeps hedging, and less and less people go with us to their headquarters..."[37] Organizers also limit their focus to the most immediate issue at any one time. For example, households without sewer connections is a long-standing problem in Jardim Damasceno, persisting even after many houses were served in 1983. Yet the activists keep sewer on the back burner, using residents' energies to resolve crisis when they arise, and returning to the sewer issue when there is no other current crisis.[38]

Neighborhood associations also play a key role in service delivery during the construction phase, but not in the way that most infrastructure planning literature suggests. The infrastructure literature places a great deal of importance on community involvement in service provision tasks such as digging trenches and laying pipes. These activities reduce costs, and increase community valuation of the new infrastructure, this literature argues (Kalbermatten, Julius, and Gunnerson 1980). Yet for a number of reasons, work brigades did not play a significant role in service delivery in the São Paulo case. For one, costs were not the most significant constraint to service for irregular settlements. Serving these neighborhoods is more difficult, but unit costs are actually lower.[39] Also, cost reduction measures alone do not explain increased service to new areas, as will be shown in the next chapter. Instead, when SABESP implementation staff did use work brigades, the primary motivation was to speed up service delivery, and not to reduce costs, though this was one result. One SABESP district administrator, for example, reported agreeing to work brigades for trenching because residents wanted service immediately. His trenching crew was occupied with other jobs for the next three months. Residents offered to dig the trenches themselves if he would bring the line and workers to make the connections. "This

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[37]Ibid.

[38]Ibid.

[39]Ricardo Guilherme Araujo, Former Coordinator of SABESP's favela team (1983-1985), personal interview, August 4, 1991, São Paulo.

way, we were able to do a lot of extensions, and a lot more quickly, which is what the population wanted."[40]

Public agencies often find it more difficult to manage work brigades than to perform the task themselves. Service providers therefore prefer hiring trenching crews to overseeing completely untrained local residents. The SABESP administrator for city-wide favela network extensions reported arriving at a work brigade and seeing that residents were at risk because too many of them were working together in a ditch that was very deep. He feared that if the trench collapsed and residents were injured, all projects in favelas would be cancelled in the political fallout of such an accident. As a result, he stopped using community labor in network extensions.[41]

The most significant role that the neighborhood associations play in the construction phase is in reducing the transaction costs to the service provider. Neighborhood association activists work out agreements with residents whose houses are in the way of a new water or sewer line. They may get residents to agree to make their yard smaller, or convince them to move to a new place in the neighborhood, or to a different neighborhood. In Nossa Senhora Aparecida, community activists went around with construction crew members and municipal housing staff to each house that needed to be reduced or removed, and negotiated with the residents. In this case, the housing office had a new sites and services program nearby, where residents could go if they agreed to leave their original houses. Through the neighborhood association's help, out of a total resident population of approximately 500 households, 50 agreed to move to new locations, and many more shrank or reconfigured their lots in order to accommodate the new network. In this way, the service provider can deal with one group within the community, i.e. the neighborhood association, rather than each household individually, which is difficult and time consuming.

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[40]Ivan Norberto Borghi, SABESP Engineer and current director of SABESP's favela team, personal interview, 22 July, 1991, São Paulo.

[41]Araujo, personal interview, 1991.

The following section presents how neighborhood associations go about mobilizing residents and making demands on service providers. This review of past water and sewer mobilizations and current struggles, reveals trajectory from simple demand-making to more collaborative engagement with service providers emerges. The purpose of this section is to understand how this came about.

From Demands to Negotiation and Engagement

Although water and sewer mobilizations have not developed into mass-based, overtly political struggles, which the NSM literature holds up as the only truly effective form of mobilization, communities do go on to mobilize around new problems and issues. Successes in past mobilizations, in other words, increases future demand-making capacity, and not the retreat to complacent inaction implied in the NSM literature. Jardim Damasceno is an example of this. Community protests there against the lack of infrastructure brought in repeated infrastructure projects, with significant municipal and state funds well beyond the level even the most committed public service agents considered appropriate.[42] With each new problem, the community activists enlisted neighborhood participation in new collective efforts by pointing out that past mobilizations had been successful, and that renewed mobilization would surely also succeed. Jardim Damsceno struggled for two years to get water service (Jacobi 1989). After water was installed, however, sewage became a significant problem, as increased water consumption led to increased sewer flow. But since there was no sewerage, all the contaminated water ran in open ditches throughout the neighborhood. Outbreaks of water-born diseases increased, and the community mounted a new campaign, this time to get sewer service. SABESP installed sewerage in 1983. Later, when rains and water infiltration caused slides, the community rallied again to

[42]Nelson Fujimoto, HABI Favela risk area specialist, personal interview, 22 August, 1991, São Paulo; and City Councilor Henrique Pacheco, personal interview, 21 August, 1991, São Paulo.

get retention walls built. The neighborhood now has a reputation of being the politicians' and planners' darling, because there are innumerable projects there to showcase.[43]

The Jardim Damasceno case illustrates a pattern seen throughout São Paulo, where the more responsive the agency is to community demands, the more active the community is in the long run. This is contrary to agencies' motivations for serving communities, which is often to get them to stop protesting. The experience of serving the most vocal neighborhoods is also a learning experience for the service provider. As will be shown in the next chapter, after an initial exposure to serving irregular communities, SABESP district staff became comfortable with the different technical approach required. Once the task had been mastered in one neighborhood, it was easier to implement in others.

Community activists' involvement in successive struggles expands their repertoire of demand-making strategies, and leads to an increasingly sophisticated understanding of the technical, legal, and institutional issues surrounding urban planning and infrastructure provision. Community leaders in Jardim Damasceno, for example, realized that simply demanding that an agency resolve a certain problem is often not enough to get results. Instead, they learned to find out what the technical or legal solution to the problem should be, and directed their pressure at the agency or individual responsible for this. After SABESP increased water pressure in the neighborhood in the mid 1980's in order to serve all the residents, erosion became a significant problem because so much water was leaking out of the pipes and seeping into the soils under houses and washing away the hillside. Initially residents thought that the retention walls the municipality had installed in the early 1980's were faulty. They complained to the municipal housing office staff, but learned from them that the increased erosion came from all the water running down the hills, and would not stop unless the leakage was stopped. The activists then began to direct their pressure at SABESP, asking it to reduce the excessive water pressure, rather than

[43]Fujimoto, personal interview, 1991..

demanding that the municipal government build new retention walls, as they might have if they had been less informed.

How do communities accumulate the knowledge necessary to have this kind of sophisticated interaction with service providers? Social learning depends on a certain degree of continuity in leadership over time. Activists' involvement in successive struggles builds their mobilization skills, like public speaking, community organizing, and networking with activists from other neighborhoods. This cumulative experience also teaches them how to interact with agency staff effectively. While sporadic, isolated struggles with new leadership each time may gain some victories, they do not engender more sustained relationships between mobilization participants and service providers and politicians.

Leadership continuity and cumulative learning depends heavily on women's participation in water and sewer struggles. Men's involvement in community struggles tends to concentrate around high-visibility, confrontational situations, such as initial struggles to get water, or periodic crises. Women's involvement, in contrast, extends to much less noticed, day-to-day activities like walking around the neighborhood and talking to neighbors about community problems, monitoring agency staff maintenance activities, or following up on promises agency staff make. In Jardim Damasceno, for example, once the community had gained most of the essential urban services, the level of mobilization dropped off and most men stopped attending community meetings. Women activists had learned how to organize sit-ins, get busloads of people to agency headquarters, gather petitions, and perform other demand-making tasks together with their male counterparts. After the first water battle with SABESP had been won, women realized that there were other needs, such as a school, a day care center, a health clinic, and the men were not concerned with these issues.

> In 1978 the whole neighborhood started mobilizing, and not just the women. Since the problems affected everyone, there were lots of men as well, until 1982 or so. Then we started getting improvements, and there was a real drop off. Because as soon as you get what you want, the people go home. And that's when we were left with just us women. We saw that it wasn't just, "you get pavement, and all your problems are solved." You also need a school. But that isn't enough, because you have to have good teachers, and make sure they show up on time, serve food to the kids, and so on. And all of this was left to the women to resolve.[44]

As a result, the women involved in the earlier struggles carried on with community mobilization work, though at a less visible level. Not only does the NSM literature see these lower key activities as atomistic because they are confined to the neighborhood level, and therefore ultimately unable to bring about real change in government policies, but it completely ignores the role women play in sustaining mobilization capacity within the community.

Women activists' daily participation in community affairs (in addition to the periods of active mobilization) not only provided leadership continuity for the neighborhood association, but also developed new kinds of demand-making skills and knowledge of different agencies. Because the men were less interested in day care, or monitoring school teachers and health clinic workers, they did not learn to work in collaboration with the agency staff, as the women did. For example, women learned from health clinic staff in Jardim Damasceno that a number of diseases their children were suffering from were caused by open sewers and the rats that bred there. They also learned from the health agents which other agencies were responsible for monitoring and enforcing basic health policies. They could then take their complaints to these agencies, which in turn put pressure on SABESP to install sewers. Without the more collaborative relationship with the health workers, the neighborhood association would not have known how to mobilize this parallel pressure on SABESP. Later, when larger problems came up, such as the 1983 and 1991 mud slides, and the whole community rallied to resolve the problem, it was the

[44]Community activist, personal interview, 14 August, 1991, Jardim Damasceno, São Paulo.

women who knew which agencies were responsible for what tasks, and had agency contacts they could call on for support.[45]

Neighborhood associations in São Paulo often learn demand-making strategies from other neighborhoods engaged in similar struggles, and came together in temporary district-level federations during crucial battles, sharing strategies and joining forces to increase their strength. Yet these district-level federations did not become institutionalized, permanent bodies, and did not develop into city-wide movements as the NSM literature believes is necessary to influence government. Nevertheless, they quickly reappeared when new crises arose. District federations developed around specific issues like water, sewerage, and health, as a result of increased networking among neighborhood associations during cycles of heightened mobilization.

The water mobilizations in northern and southern São Paulo in the late 1970's and early 1980's are an example of these temporary federations (Jacobi 1989). In northern São Paulo the water mobilization federations developed with the help of a local priest who worked in Jardim Damasceno and other neighborhoods of the region. The priest encouraged residents of the different neighborhoods to join together to make demands on the municipal government.[46] The federation's struggles ended in victory in 1980, when SABESP provided water the communities of the region. In 1983, health agents working in the area helped the Jardim Damasceno neighborhood association rekindle contact with nearby favelas and illegal subdivisions around sewer service. Damasceno activists saw that the other neighborhoods were suffering from the same problem, and brought them together to pressure SABESP for sewerage. The health workers influenced the district-level confederation by focusing attention on the health problems resulting from the lack of sewers. But the experience of the various neighborhood working together had already developed during the water mobilizations. When the neighborhood associations came

[45]Ibid.
[46]Ibid.

together again around the sewer issue, they brought their earlier experience to bear on the new struggle.

> We knew that it was important for us to all work together, because if SABESP was going to develop a project in the region, it wasn't going to do it just in Damasceno. It would be for the whole region. It wouldn't spend money just to do a little project in Damasceno, specifically, where they would have to bring in workers just to work in this one neighborhood.[47]

Jardim Damsceno activists knew they had to bring the other communities into their struggle because each needed the same thing, and none was getting any results. The "pioneering" work of the more mobilized Jardim Damasceno not only pushed SABESP to tackle a task it preferred not to do, but their example initiated a process of mobilization in less organized communities. This expanding mobilization effect can push service providers to extend services more broadly. In another example, during the 1983-1985 period, SABESP faced cascading demands for new services as unserved neighborhoods saw that more organized communities had been served, and decided to press for service in their communities.[48] As a result, SABESP provided service to more than just the most aggressive neighborhoods. This is significant because many planners argue that using level of mobilization as a criteria for service means that many neighborhoods that need services will never get them. This example shows that in addition to giving the service provider new skills in dealing with previously-excluded communities, responding first to the most mobilized can initiate a wave of increased community mobilization, which in turn leads to broader service provision.

Mobilization successes can also spill over to less organized communities, which can "piggy-back" on the others' successes without actually mobilizing themselves. The favela Nossa Senhora Aparecida, that had gone for nearly 20 years without water, sewer, or electricity, gained initial access to water after substantial favela mobilization in other regions. As one community leader reported, "there wasn't any need for a whole lot of

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[47]Ibid.

[48]Araujo, personal interview, 1991.

pressure from the [Nossa Senhora Aparecida] population because the other favelas had already come together for water and electricity, and we were just coming in. We benefited from the struggle of the other favelas with the water and electricity we received." All that was required was for the neighborhood association, which already existed, to register with the municipal government.[49]

Neighborhood associations gain information from sanitation technicians and administrators that enables them to make demands that are not beyond agency capabilities, but which would not be implemented without outside pressure. When communities frame demands within the limits of what is possible for the agency to do, and in a concrete form the agency understands, their requests are more likely to be successful. Often when communities press for new service, agency staff explain the technical and legal reasons that block service. Rather than deterring further demand-making, the sophisticated neighborhood associations see these obstacles as yet another challenge that they must overcome. The soil erosion problem in Jardim Damasceno is an example of this. Once the neighborhood association leaders learned that the problem came from the high pressure in SABESP's water lines, they turned to SABESP engineers for an explanation of why the pressure was so high. Without understanding the problem, the neighborhood association might have demanded that SABESP solve the problem somehow, directing community protests indiscriminately at SABESP. Through their contact with SABESP district office technicians, however, the leaders learned that the district administrator could not resolve the high pressure without installing a better pressure regulator valve. As a result, activists are now pressing the central administrator who controls funds for new network equipment to approve a new valve for their region.[50] Crucial to the successful outcome, the district

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[49]Community activist, personal interview, 6 July, 1991, Nossa Senhora Aparecida, São Paulo. Registration with the municipal government as an official representative body of the favela was required by the municipal government to enter into formal service agreements with the favela. Favela and illegal subdivision residents reported resisting registration now, recalling that services were often conditioned on political support in the past.

[50]Community activist, personal interview, 14 August, 1991, Jardim Damasceno, São Paulo.

administrator gained an ally through his contact with the neighborhood association. Although the district administrator is sympathetic to the needs of Jardim Damasceno, he did not want to request the valve himself, not wanting to "rock the boat."

Neighborhood associations direct their demands at various agencies and elected political figures, increasing contact and accountability among different agencies. This creates "constructive competition" among agencies and between politicians and agencies for improved services. The self-built settlement Vila Arco Iris, for example, has struggled to get sewer service despite prohibitions against new connections within the watershed protection area where it is located. Community leaders have pressured the state environmental quality agency, enlisted the assistance of a local state representative, lobbied the World Bank to include their area in a watershed protection project loan, and presented alternative sewer treatment proposals to SABESP.[51] This impressive array of pressures has not brought sewer and full water service yet, but the community is becoming increasingly sophisticated in its demand-making, demonstrating a willingness to cooperate with public agencies and an ability to play hard ball, when necessary. One of the outcomes of their efforts has been to bring diverse agencies together around the related environmental and public health issues of sewerage. Without the prodding from communities like Vila Arco Iris, these agencies would tend to function in isolation, limiting themselves to their respective areas of responsibility, and not necessarily addressing the needs of the city's population.

Through contacts with university housing specialists, community activists in Vila Arco Iris learned about an alternative sewer treatment system that could be operated locally, serving their community and a number of adjacent neighborhoods that currently discharge their sewage into the Billings reservoir. The neighborhood association got a prototype of this system, assembled it themselves in their neighborhood, and called a meeting with representatives from SABESP, the state governor's office, the municipal housing office, a

[51]Community activist, personal interview, 5 September, 1991, Vila Arco Iris, São Paulo.

number of environmental groups working on the watershed protection issue, and the state environmental protection agency. During the meeting, activists used sewage they had collected from community households to demonstrate how the system could remove 80% of it solid matter in a two hour-period. The SABESP technical representatives were still not convinced that local sewer treatment should be adopted, despite precedents for local sewer treatment in other parts of the watershed protection area. But the community had demonstrated it could take the lead in proposing alternative technical solutions. In addition, by bringing representatives from these various areas together, they focused political pressure on SABESP and HABI to resolve housing-related environmental issues. The outcome of this kind of pressure remains to be seen, but Vila Arco Iris residents have suggested that environmental protection does not have to be a zero-sum equation -- people can live in this part of the city, and the environment can still be protected.

Neighborhood associations watch for political opportunities. They increase their demand-making activity when sympathetic agency staff, politicians, or beneficial programs emerge that could further their interests. Activists not only demand services when the opportunity arises, but contribute suggestions for resolving the technical problems. The story of how the favela Nossa Senhora Aparecida came to be included in the municipality's reurbanization program[52] illustrates both how communities take advantage of windows of opportunity, and come forward with their own substantive contributions. The municipal Development Agency, EMURB, initially made a proposal for infrastructure improvements in Nossa Senhora Aparecida in 1983, but the incoming municipal government under mayor Mário Covas did not execute them. The previous municipal government under mayor Reinaldo de Barros had just completed 26 favela reurbanization projects. The Covas administration chose not to continue with these projects, in part because it would be

[52]"Reurbanization" is the term for São Paulo municipal global urban infrastructure projects for favelas that already have some urban services, but need significant street and lot realignment to incorporate the neighborhood into the urban fabric of surrounding neighborhoods. The project includes land regularization, 99 year leases to current residents, rebuilding some residences within the original settlement, and relocating some residents elsewhere.

continuing a project begun by an opposing political party, and in part because the project funding source had dried up. EMURB drew up new urbanization plans in 1986, after mayor Jânio Quadros came to office in 1985, but his policy for favelas centered on favela removal, so again the plans were not executed. Community organizers had collaborated with EMURB technicians on each of the reurbanization plans, working out where streets and retention walls should go, which houses would need to be removed to accommodate the improvements, and where they could be relocated within the favela.[53] Through this collaboration neighborhood association leaders had learned not only the role that site plans and proposals play in the planning process, but came to understand the particular problems in their neighborhood -- specifically that a large number of houses would need to be removed or made smaller to accommodate wider streets.

In 1989, the Worker's Party (PT) candidate, Luiza Erundina, was elected mayor of São Paulo. Erundina had worked with favela and illegal subdivision movements, land occupations, and other popular struggles first as an activist, and later as a city councilor. Favela groups saw her election as a tremendous victory for their cause, and an opportunity to finally have some direct input into municipal housing policies. The Nossa Senhora Aparecida residents knew that she would be receptive to their goal of getting improvements in their community. On the first day of the new municipal administration, they went in rented buses to the mayor's office to present their proposal for urbanization, based largely on the 1986 plans. Their proposal included recommendations for alternative locations of favela households, either within or near the favela ,which they proposed to facilitate themselves. As a result, the Erundina administration chose Nossa Senhora Aparecida as one of the first favelas for its new reurbanization policy. The favela is now getting streets, retention walls, and new sewer lines to replace the original network that stopped working promptly after installation in the early 1980's, and individual water connections in each house.

[53]Community activist, personal interview, 6 July, 1991, Nossa Senhora Aparecida, São Paulo.

The association activists in Nossa Senhora Aparecida, in sum, took advantage of the opportunity the new PT administration presented for increased citizen participation. The community had wanted neighborhood improvements for six years, but there was never political support for the project. Their earlier experience with the EMURB technicians taught them the importance of drawing up plans and how to present proposals. When Erundina was elected they took the initiative and pushed for their project. By presenting solutions to some of the most difficult problems -- i.e., household relocations -- the community activists of Nossa Senhora Aparecida showed the way for the municipality to implement policies benefiting favelas.

The Nossa Senhora Aparecida case highlights a kind of demand-making that is very different from what the new social movement literature classifies as authentic, or desirable -- antagonistic, contestatory protests evolving into increasingly politicized and wide-spread mobilizations. Instead, water and sewer mobilizations in São Paulo have led to increased *engagement* with government. This engagement takes various forms, from participation in the planning process, to the oversight and actual production of services. Most planning literature sees community participation in project implementation as resulting from government agencies wanting to reduce some of their responsibilities -- and costs -- by allowing citizens to take over some tasks, like drawing up development plans, monitoring construction, and doing some of the manual labor themselves (Susskind & Elliott 1981). In the São Paulo case, however, community participation in service delivery emerged largely out of community initiative in the face of agency inaction. The result was the same -- the community's direct involvement in some tasks that government normally performs, in these cases project management and oversight, neighborhood surveys, and mediation between residents and project staff, and a reduction of the burden on agencies. In some cases the neighborhood associations in effect redefined the concept of service in a more relevant way, providing services that infrastructure agencies do not consider their responsibility, but that are nevertheless essential for successful service provision in favelas,

such as providing alternative locations for dislocated households. The following discussion shows what this kind of engagement looks like in the São Paulo case.

The key contribution neighborhood associations make in facilitating service provision is mediating between service provider requirements and residents' needs. Favelas and many illegal subdivisions often have dense and irregularly arranged households, as noted. Houses that jut into the street making it windy or narrow in spots make network extension costly, or some times impossible as explained in Chapter Two. In order to receive water and sewer networks, residents must give permission for network lines to pass through their lots, and some lots must be reduced, rearranged, or relocated altogether. Favela and illegal subdivision extension work low-status compared to serving "normal" neighborhoods, therefore, because the beneficiaries are low-income, and service involves intensive contact and negotiations with residents. SABESP staff is not trained for this kind of task. Having a neighborhood association to represent the entire community makes this task manageable for network extension technicians because technicians can get to know the members of the association and let it negotiate lot reductions and relocations with individual residents. The Erundina favela reurbanization projects demonstrate how this can work.

During the municipality's reurbanization project in Nossa Senhora Aparecida, neighborhood association members facilitated negotiations between the construction team, the municipal housing office, and residents around reductions and removals. Before presenting their demands to the Erundina administration, the neighborhood association had held community meetings where residents had agreed to move, if necessary, but only if the municipality helped them rebuild their homes. The neighborhood association negotiated with the municipality on behalf of residents for materials to rebuild walls, or for lots in nearby sites-and-services projects. In return, the association worked out agreements with individual residents to cede parts of their yards, or to relocate, in order to get full sewer and water services, making the project possible. An infrastructure agency like SABESP would

not recognize alternative housing as a normal part of their function. Yet both nearby housing and materials to rebuild walls damaged during network installation was crucial for residents. Residents wanted the new service, but also wanted to stay in or near their neighborhood. In this sense, the neighborhood association provided a service that was necessary for the project to be carried out in the first place, but that an agency like SABESP would not be capable of providing or see as its responsibility.

Neighborhood associations can make major contributions to service providers by resolving disputes among neighbors that normally keeps agencies from providing service at all. Service provision often requires cooperation among neighbors that service providers are unable or unwilling to bring about. In such cases, neighborhood associations can get neighbors to cooperate, or can mediate impasses that block service. For example, in Jardim Damasceno, the neighborhood association negotiated access agreements between uphill and downhill neighbors to allow the uphill neighbors' sewer lines to pass through the downhill neighbors' yards so they could connect. The association's role was crucial, because SABESP did not have the power to force downhill residents to cede a right-of-way, nor did they feel it was their responsibility to ask neighbors to cooperate with each other. Rather, SABESP interpreted its task as limited to performing those network extensions that were technically feasible. If health problems came up, SABESP technicians argued, the community could call health officials, and the health officials "might be able" to force neighbors to cede a right-of-way.[54]

Organized communities aid in assuring that infrastructure is properly installed. Low-quality or improperly installed sanitation networks is a classic problem for infrastructure planners and implementing agencies. Agency administrators focus on gross numbers, such as kilometers of network installed, overall project costs, or number of connections, and do not have time to monitor the quality of the service. Supervisors

[54]Arnaldo Boa Sorte de Oliveira, SABESP Engineer in Freguesia de O district, personal interview, 14 August, 1991, Jardim Damasceno, São Paulo.

contracted for this task are notoriously lax in their oversight, even when they are government agents supervising private firm performance. Part of the reason for this is that supervisors are susceptible to pressures from construction firms to look the other way (Tendler 1982, HABI staff 1991). There is also little incentive for them to be zealous monitors, since they are paid regardless of how many faults they find in the construction work. Community members, however, have a great deal at stake in getting good services, particularly since they know that once the infrastructure is installed they may not see a repair crew for a long time, if ever. The community is therefore in an ideal position to monitor and report on service installation deficiencies. This is what happened when the municipal Popular Housing Office, HABI, included Nossa Senhora Aparecida neighborhood association members in weekly project meetings with the municipality, the contractors, and the firm hired to manage and coordinate construction. Both the neighborhood association and the municipality wanted community residents to be involved in the project's execution, as will be discussed in more detail in the next chapter. (See Appendix B)

In the HABI case, association members followed the details of project design, materials specifications, time tables, work crew size, and the like. They then could recognize when the construction crew was not fulfilling its contract, and saw when the management firm was not reporting on lax performance. The association members reported shoddy workmanship, cheap material substitution, missing equipment, and lazy or missing workers. After a while this was less necessary because the contractor knew that the association would report inadequate work. Nevertheless, a certain amount of ongoing vigilance was necessary. Association members felt that the contractor was constantly trying different ways to reduce costs or shirk responsibilities. On each occasion, association members reported the new offense to the municipality. As a result, the municipality knew when the work crews were slacking off, and when the management firm was not doing its job; it responded by increasing its enforcement measures, withholding

payment, or increasing direct supervision. As a result, the municipality was even in the process of firing the management firm at the time of field work because of neighborhood association complaints. This kind of participation allows the community to have more control over projects being built in their community while at the same time provides the municipality with a built-in -- and inexpensive -- check on the quality of work their subcontractors are performing.

Water and sewer providers generally know whom they serve, but do not necessarily know whom they do *not* serve. This is a particularly important omission in the case of sewer service, because unserved customers create a health hazard for other residents. Public health agencies need to know who is not served in order to address the problem. Ideally, SABESP would also want to know who is not served, given its role in improving São Paulo's sanitation. In practice, however, SABESP focuses more on engineering issues, and less on public health. The community association in Jardim Damasceno pushed SABESP to address public health concerns by demanding that SABESP serve unconnected residents, and providing the missing information regarding unserved residents. Part of the Jardim Damasceno community was served with sewer connections, but a significant portion of the community had never been connected. The association activists were concerned with the health problem because many children were getting sick. They knew that this was related to the sewerage because municipal community health clinic workers had explained how disease vectors, such as rats and contaminated water, made the children sick. The local SABESP administrator complained that he could not address the problem without knowing which houses were not served, and he had no practical way of finding this out. So the neighborhood association members proposed they take a sewer census, and gave SABESP a list of the unserved houses.

Conclusion

Neighborhood association mobilizations play a central role in overcoming the political, legal, and technical impediments to service provision by forcing public agencies to act, and facilitating the implementation of network extensions. By mobilizing mass protests, gaining the support of politicians and church leaders, and enlisting sympathetic agencies to support their demands, neighborhood associations create a constant pressure on non-responsive service providers. Water and sewer mobilizations, however, do not develop into permanent, structured, city-wide movements with explicitly political aims. Rather, mobilizations are cyclical, springing into action when crises erupt or when opportunities emerge, and pulling back after demands have been met. During the periods without active mobilization, community activists -- particularly women activists -- continue to work on community issues that are less visible, but equally important, like monitoring network maintenance, the performance of health care workers and school teachers, and running literacy and youth programs. Community activists' ongoing involvement with these other neighborhood issues creates continuity in leadership, maintains a latent capacity for demand-making within the community, and continuously develops the activist's skills for interacting with agencies. Continuity in neighborhood association leadership makes the associations well equipped to put pressure on public agencies that are less than enthusiastic about service. Repeated mobilizations prod the agency into action when service lags. Rather than demonstrating non-engagement with government, cyclical mobilizations show a tenacity that helps promote service provider accountability. While constant, active mobilizations might further increase service quality, this kind of mobilization is difficult to maintain. More to the point, it is not necessary to have constant mobilization in order to get better service. Furthermore, during the "demobilized" times, neighborhood association activists gain different skills that contribute to more effective demand-making in subsequent struggles.

The new social movements literature argues that social movements must form permanent, broad-based coalitions in order to have any significant impact on government. In the three communities studied, however, water and sewer mobilizations were successful even though they did not evolve into formal, city-wide federations of neighborhood associations. Nevertheless, there was a significant degree of learning and collaboration among movements during key struggles, and consistency in their demands. Water and sewer struggles in different neighborhoods gained from one another through mobilization "spillover," by "piggy-backing" on other movement successes, and by forming temporary district-level federations when unified demands were the only way to get agency response. Rather than a sign of weakness, this non-institutionalized form of mobilization may be a strength, in that dispersed mobilizations (1) are less of a political threat to the service provider, (2) seem more genuine and spontaneous, and thus carry greater legitimacy, and (3) are easier to address because the agency can begin by attending to a few first, and gradually broadening service as agency capacity increases. Although this study does not test this hypothesis, the possibility that strength came through what the new social movement literature considers a weakness cannot be discarded.

The NSM literature sees mobilizations as being genuine only if they are autonomous from government-manipulated relationships, and contestatory, challenging government policies. Instead, a part of the success of the water and sewer mobilizations in São Paulo can be attributed to their increased engagement with government service providers. Neighborhood associations mediate between the agency and residents, resolve disputes among residents surrounding service delivery issues, and coordinate complementary activities essential for successful service delivery, thus facilitating service provision. Associations also take on tasks that increase agency performance, like monitoring and reporting on service progress, providing information that the service provider cannot easily collect, and fostering communication among various agencies to improve their coordination. All of these activities are much more participatory and

collaborative than the oppositional role the NSM literature envisages for mobilizations. None of this means that neighborhood associations are captive to agency interests, or that they subordinate their needs to politically convenient alliances. Rather, neighborhood associations are learning how to engage with service providers to serve communities' needs that could not be met without some form of collaboration.

CHAPTER FOUR

SERVICE IMPROVEMENTS

Between 1979 and 1985 SABESP greatly expanded service provision to previously-excluded communities, improved service appropriateness to user needs, and became more accountable to community demands. To a large extent, this came about in response to user demands and user engagement with service providers. Yet this is not a full explanation of how SABESP became more responsive to previously excluded segments of the population. This study shows that in addition to pressure from below, SABESP's improved performance in favelas and illegal subdivisions came about in response to pressure from politicians, constructive competition from municipal agencies, and initiatives by reform-minded staff within SABESP who were able to take advantage of political opportunities provided by these three forms of pressure. In this chapter I explore how SABESP came to increase service provision to irregular settlements. I separate my discussion into three more or less discrete "phases," though some factors leading to improved services run throughout the period between 1979 and 1991. I start out the discussion by pointing to the way politicians from different municipal and state administrations influenced service provision.

This research looks exclusively at government policies towards favelas. Limiting the discussion to favela policies focuses attention on the technical, legal, and institutional challenges common to all informal settlements, but avoids the case-specific issues of property ownership laws, subdivision statutes, and the often murky division between public obligation and private responsibility. While these are important issues, they are less generalizable beyond São Paulo, and are beyond the scope of the present research.

Political Pressure

Like community pressure, pressure from politicians on public agencies can induce better agency behavior. In the São Paulo case, politician pressure on SABESP increased as the redemocratization process initiated by the military government in the mid 1970's progressed. By the late 1970's and early 1980's the first tentative signs of political liberalization were bearing fruit. Government increasingly tolerated protests, initiating a growing wave of popular mobilization. Favela and illegal subdivision residents put pressure on agencies to address previously suppressed and growing needs. Opposition politicians, elected on progressive platforms, were increasingly sensitive to the growing power of popular movements and pressed for programs to address their interests. This pressure from above gave support to reformist bureaucrats within government agencies like SABESP to initiate innovative policies towards excluded groups such as favela residents.[55]

Reformist initiatives by mayors and state governors precipitated three periods of significant advancement in service provision to São Paulo's favelas. In the first, São Paulo's mayor in 1979, Reinaldo de Barros, wanted to develop a program targeted at low-income residents. Mayor Barros' political base came largely from poor and working class sectors, which he cultivated by advocating programs for the poor, following in the populist tradition of the 1950's and early 1960's. Housing specialists within the municipal Bureau of Social Welfare (COBES) responded with a proposal for an ambitious urbanization project for a few large favelas that had active neighborhood associations. The urbanization project was the first to provide comprehensive urbanization -- streets, gutters, street lighting, water, sewer, and some community facilities -- to favelas. A subcomponent of COBES' favela program involved enabling legislation that urged both SABESP and

[55]By reformist bureaucrats, I am referring to agency staff who are inclined to push for reforms favoring excluded groups, or improving agency performance and accountability in this direction. Reformists may have political, ideological, social, or personal self-interest motivations for wanting to improve agency performance (Grindle 1977, Tendler 1982 and 1991, Fox 1986).

Electropaulo, the state electricity company, to expand service provision to other favelas throughout the city.

In 1983, however, a popularly elected state governor, Franco Montoro, put pressure on SABESP to develop its own program for favelas. Prior to 1982, governors were appointed rather than elected. In this first open election for state governors since the military coup in 1964, São Paulo elected Montoro, an opposition candidate, who ran on a progressive ticket of substantial social reforms, and increased programs for the poor. Montoro's strongest electoral base was in the city of São Paulo, where opposition mobilization was quite active. During his administration he gained a reputation for listening to citizens' demands, and responding with programs such as improved health care, day care centers, transportation, and the like.[56] The governor's pressure on SABESP to increase service to favelas was another example of this. Montoro's pressure enabled reformist technicians and administrators within SABESP to institute reforms that went far beyond the Bureau of Social Welfare's program. Rather than focusing on just a few favelas, the SABESP favela program aimed at providing service to favelas throughout the city, regardless of size or previous level of mobilization.

In 1989 a progressive mayor again provided impetus for reformist staff within the municipal administration to develop targeted projects for favelas, illegal subdivisions, and other underserved communities. Luiza Erundina's election was a significant victory for the Workers Party (PT), an opposition party that grew out of the new labor union movement in São Paulo in the late 1970's. The PT ran a number of successful mayoral campaigns across Brazil in 1989, but the São Paulo victory was the biggest achievement -- a divorced women housing activist who grew up in the northeast, Brazil's poorest region, running the city at the industrial heart of Brazil, and the largest city in South America. Under Erundina's direction, the Municipal Housing Office, SEHAB, and the Division of Popular Housing, HABI, developed a favela urbanization program that involves extensive

[56]Araujo, personal interview, 1991.

community involvement in project planning and execution. Like its 1979 predecessor, this project is limited in scope -- serving only a small portion of the city's favelas. But it is developing technical and joint community management practices that overcome some of the most significant barriers to service in favelas, most notably in the area of sewer extensions. While the two earlier phases -- the first municipal favela project, and SABESP's major water service extension program -- made enormous advances in technical innovations and construction practices for favelas, neither project involved community residents in project design or implementation. By involving community members in the projects, HABI has been resolved some technical problems that until now seemed insurmountable.

PROFAVELA & PROAGUA (1979-1982)

As explained above, SABESP has exclusive concessionary responsibility for all water and sewer service in the municipality of São Paulo. Initial advancements in service provision to favelas came not from within SABESP, however, but from municipal agencies. In 1979 two municipal government agencies -- the Bureau of Social Welfare, COBES, and the municipal development agency, EMURB -- initiated a pilot project to provide comprehensive urbanization in favelas, PROFAVELA. The project included water, sewerage, electricity, storm drains, and retention walls. The initiative for the program came from COBES in response to the mayor's wish to create programs for his low-income constituents. COBES chose which favelas to serve, based on prior contact with residents, and the level of community activism. COBES selected only favelas with active neighborhood associations for inclusion in the program. COBES was responsible for working with the favela residents, explaining the program, negotiating relocations and lot reductions, and serving as an intermediary between the residents and EMURB engineers. EMURB developed the urbanization site plans, and either executed the project itself, or contracted it out and supervised project execution. PROFAVELA was the first formal project providing water and sewer service to favelas. Prior to 1979, only one fifth

of favelas had water service, and then only with communal water taps installed the 1950's and 1960's after extensive mobilization, and political determination on the part of the mayor or state officials. Most favelas remained without water service, much less individual household connections.[57] Less than one percent of all favelas had sewer service. PROFAVELA ultimately served 26 favelas, representing only 3% of all favelas, but serving 19% of all favela households -- the project was carried out in the largest favelas -- with 14,200 water and sewer connections (EMURB 1982). Under formal agreement with the municipality, SABESP provided water, and assumed maintenance and operation responsibilities for water and sewer lines installed and paid for by the municipality. Project funding came from the municipal government's own budget and from a special federal fund for municipal popular housing projects, FUNAPS, the National Popular Housing Fund, which was 90% to 95% subsidized by the federal government (Bonduki 1991).[58] There were no provisions for cost recovery in the PROFAVELA project. Although SABESP was a reluctant partner in PROFAVELA, the financial risk to SABESP was minimal, since it did no network extensions itself. The municipality effectively "donated" 14,200 new customers to SABESP.[59,60]

The PROFAVELA project set out to serve areas that most engineers considered "unserviceable" because of all their chaotic internal layout. EMURB made a number of significant technical and procedural advancements in infrastructure service under PROFAVELA in order to overcome these technical problems. EMURB's most significant "innovation" was a piping material for branch water connections to households in the interior of favelas. As explained, the interior of favelas are difficult to reach with standard

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[57]Araujo, personal interview, 1991.

[58]Carlos Antonio Mingrone, former coordinator of Pro-Favela for EMURB (1979-1983), personal interview, 3 September, 1991, São Paulo, Brazil.

[59]Mingrone, personal interview, 1991.

[60]SABESP took over only those connections that conformed to SABESP technical standards. Many of the sewer connections executed under EMURB's direction did not conform to SABESP standards because they were "mixed" sewer and storm drain systems, and were never taken over by SABESP or any other agency (Araujo, personal interview 1991). These systems fell into disrepair shortly after the project was completed.

materials and construction practices because of their narrow and winding streets. Though high density poliethelene (PEAD) was already in use in apartment buildings, it had not been used in street networks in São Paulo prior to PROFAVELA because it does not have the same strength as metal pipes and therefore cannot withstand vehicle traffic. But most favela streets do not have vehicle traffic, so it is an ideal material to use for branch extensions. PEAD is flexible, and can therefore follow the narrow, winding pathways within favelas. Because it is flexible, it can This allowed EMURB to serve all the households in the favela, and not just the ones along the outside of the favela abutting city streets. PEAD is also strong relative to other plastics -- strong enough to serve up to nine households on a branch. Finally, it comes in long 50 meter rolls, which allows it to reach back to houses tucked away from the main streets.

EMURB also changed construction practices to adapt to favela characteristics. EMURB engineers knew that many favela households did not have street frontage, that streets were narrow, and that most households were only accessible by narrow, winding pathways. So they worked to develop technical approaches that could reduce street width requirements. At first EMURB served streets 4 meters wide or more, but by the end of the project was serving streets with 3.5 meters in width, and less if it was only for short lengths.[61] By reducing street width requirements EMURB could serve many more favela streets, and reduced the unit cost of network extensions. In addition, EMURB construction crews found that their vehicles actually could maneuver along streets with 3.5 width, contrary to what SABESP engineers had argued. Multiple hook-ups from one connection to the main water line allowed service to houses without street frontage. Up to four houses could be connected in this way. In contrast to SABESP's contention at that time that favelas could not be serviced, the use of PEAD and multiple hook-ups made it possible to serve 100% of favela households with water.

[61]Mingrone, personal interview, 1991.

Throughout the PROFAVELA project SABESP resisted reducing its technical standards. EMURB and COBES, of course, could reduce equipment and construction standards as much as they wanted to because they executed the project on their own. But if they wanted SABESP to take over maintenance of the network, they had to use standards that SABESP would accept. If the standards were too low, SABESP would not take it over. SABESP's refusal to take on the mixed sewer and storm drain systems is an example of this. Nevertheless, formal negotiations and ongoing contact between COBES (which became FABES in 1982), EMURB, and SABESP ultimately pushed SABESP to institute some minor standard reductions for favela service. Despite SABESP's foot dragging, and some overt resistance, it did accept some significant changes. SABESP's biggest concession on standards was to accept the PEAD network branches, because it did not consider PEAD standard material for that kind of branch. Although SABESP did none of the actual work, made no financial contribution to it, and had to be continuously prodded by the municipality, accepting lower standards and unorthodox technologies for favelas was unprecedented. SABESP was also learning the PROFAVELA example that service in favelas was not as difficult as engineers had thought. Although SABESP was not yet prepared to make changes in its own construction practices, it had agreed to accept the "substandard" network it took over from the municipality.

A subcomponent of the PROFAVELA project, PROAGUA, involved water and sewer service in favelas independent of the municipality's projects. Under this program, SABESP was to provide individual water service to favela households directly, without municipal intervention. PROAGUA was intended to reach all favelas not included in the 26 urbanization projects. SABESP did not embrace the program, however, refusing to make any substantial changes in its own construction and equipment standards. SABESP was serving only 25% of all favela households by 1983, just five percentage points more than were served in 1979 (Taschner 1982, SEHAB 1989, SABESP n.d.). Part of the reason for the less-than-overwhelming performance of PROAGUA was that SABESP only

provided new service at the specific and official request of the municipality.[62] In addition, SABESP only served households on streets that were at least 4 meters in width, and had official status, which excluded nearly all internal favela streets. The only difference between SABESP's PROAGUA work in favelas and standard extension service was that it was for favela residents. In terms of technical procedures and requirements, it was identical. This severely limited the program's impact.

SABESP's reluctance to provide services on illegally occupied areas was the most significant barrier to PROAGUA having a greater impact. Because SABESP did not want to assume responsibility for serving favelas, the team insisted on verifying with the municipality that favelas were on municipal land, or getting a go-ahead for service if they were not.[63] Requiring a municipal request for service extensions meant that the municipality had to advocate for favela residents, rather than SABESP dealing with them directly. Though SABESP had engaged in negotiations with illegal subdivision residents during the 1977-1980 period, accelerating service to the Brasilândia region in the north, and to the Interlagos region in the south (Jacobi 1989), it still resisted negotiations with favela residents because of the land ownership issue. Community organizers from the favela Nossa Senhora Aparecida, for example, reported frustrating interactions with SABESP during that period. SABESP officials told a community delegation that there was nothing they could do, unless the municipality gave the "ok."[64] In effect, this was SABESP's strategy for not assuming liability for possible future claims against the agency from a disgruntled private land owner. SABESP relied on the municipality to "take the heat" if anything came up.

That SABESP was serving favelas at all was remarkable, however, given its past position. SABESP accommodated this change relatively easily, if begrudgingly, by giving

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[62]Araujo, personal interview, 1991.

[63]As mentioned, SABESP "devolved" the legal issue -- and responsibility -- to the municipality in order to avoid possible suites from landowners.

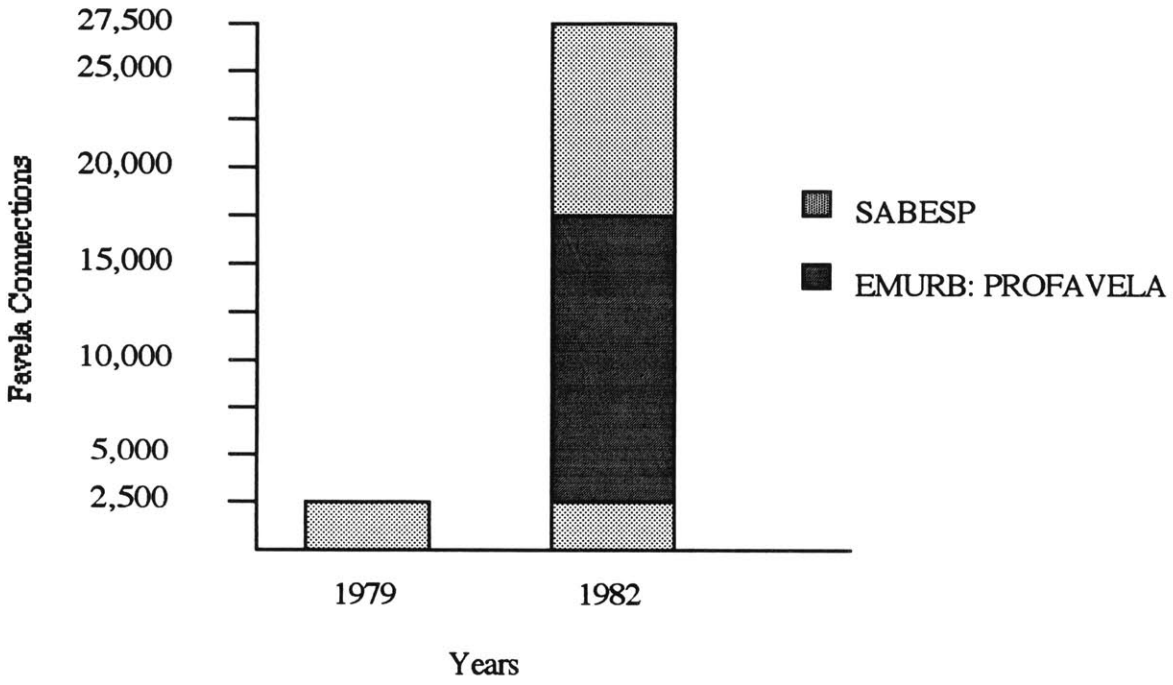
[64]Community activist, personal interview, 9 July, 1991, Nossa Senhora Aparecida, São Paulo.

the favela extension coordination responsibility to a small team that already existed to dealt with requests for minor network extensions. SABESP contracts out most major network extensions to large, specialized construction firms, and plans them through a five-year planning process. SABESP handles minor extensions, such as a few streets, or a small neighborhood, through its district offices. This team gathered favela service requests and channelled them to SABESP district offices for execution. In theory, this team could easily coordinate with the municipality, since they already dealt with it on tenure questions surrounding new subdivisions, the source of most minor extension requests. In practice, however, the team resisted cooperating with the municipality. Of its two key staff people, one was hostile to favela residents and COBES and EMURB staff alike, and the other was trying to move into politics and was interested in using service provision to gain voter support.[65] Nevertheless, PROAGUA was SABESP's first experience in directly serving favelas. Also, program results were impressive. At the beginning of PROAGUA there were 2,130 water connections in favelas in São Paulo. By the end of the program in 1982, approximately 27,000 favela households had direct water connections (SABESP n.d., PMSP 1982). Even without counting the 14,200 connections made in the PROFAVELA projects, the remaining 12,800 connections represent a six-fold increase in just three years. (See Figure 1.)

[65]Araujo, personal interview, 1991.

Figure One

INCREASE IN WATER CONNECTIONS TO FAVELAS: 1979-1982



Sources: Toniolo 1982, PMSP 1982.

Constructive Competition

Why did the municipality take the initiative in innovating service to unserved groups, when the technically more sophisticated SABESP is by far better equipped to provide these services? A number of factors combined to make COBES more sensitive to user demands, contributing to its pioneering role. Whereas unserved residents had protested actively against SABESP for not providing services, COBES "felt" the demands more acutely, and responded. Three factors made COBES and the municipal administration in general more sensitive to user demands: (1) the presence of a professional corps that is trained in public health and social services, and who define their jobs as responding to the needs of city residents, especially the poor, in contrast to SABESP, which sees its role as more limited to engineering tasks; (2) a network of district offices

throughout the city where (unlike SABESP's district offices) there is substantial direct contact with citizens and a sympathetic and responsive staff; (3) involvement in multiple project-based activities related to housing, which put the significance of sanitation in a broader perspective, unlike the more limited, engineering perspective of the SABESP staff.

COBES had both the inclination and the technical capacity -- with EMURB's help -- to address favela infrastructure deficiencies. Policy-makers had been arguing since the early 1970's that favelas would spontaneously disappear, once the new immigrants to urban areas found jobs and could afford "normal" housing. But the COBES professional staff believed otherwise. They were convinced that favelas were not a passing phenomenon. Also, they recognized that favela residents were not all new urban immigrants, but many were long-time city residents whose incomes were dropping, or who chose to live in favelas to increase their disposable incomes (Perlman 1974, Evers et.al. 1983). Nor did COBES staff believe slum clearance a viable policy, since favelas reappeared as quickly as people were cleared out of them. COBES staff saw favelas as a growing and permanent phenomenon. Rather than eradicating them, they believed, favelas needed comprehensive intervention to integrate them -- both socially and physically -- into the fabric of the city.

COBES was not capable of city-wide interventions, other than regulatory controls or empowering legislation; the PROAGUA agreement with SABESP is an example of this. It was, however, able to mount neighborhood-specific projects. But because part of the COBES staff already worked with favela residents in high-risk areas subject to slides and flooding, they already understood project-based approaches to favela interventions. They had developed local slide control programs, like building retention walls, and had worked to relocate favela residents to more stable areas. Building a comprehensive urbanization program for entire favelas was a logical next step. It also allowed COBES to fulfill its social welfare mandate in a comprehensive way that was satisfying to agency staff. But COBES' program was overambitious, given the scope of the need city-wide, and the lack

of cost recovery. COBES terminated PROFAVELA in the beginning of 1983 with no post project evaluation, and no second-generation project growing out of the earlier experience because federal funding had been cut off to the FUNAPS program, and the new municipal government did not want to dedicate non-recoverable funds in only a few neighborhoods. Nevertheless, COBES made major technical and construction practice innovations by focusing on small projects where program teams had the time and latitude to work out individualized solutions to favela service problems.

SABESP, being a more specialized, better-funded, and technically more sophisticated agency, was oriented to uniform, standardized service throughout the city. It was not good at small-scale projects, other than performing network extensions in neighborhoods that have expanded since the initial infrastructure was installed. COBES' prodding, however, did produce substantial improvement within SABESP. COBES and EMURB engaged in a form of constructive competition through a combination of demonstrating that even a small, non-technical agency could perform service extension work to favelas, while at the same time negotiating with SABESP about network standards. COBES got it to accept "substandard" water network from the PROFAVELA projects, and pushed it to make some favela connections on its own, though these were limited to standard service along official streets, and ignored residences within favelas. Even if the SABESP program coordinators were less than enthusiastic, they did instruct the agency's district office technical staff to execute a large number of favela connections. These technicians, in turn, gained practical experience interacting with favela residents.

SABESP Favela Team (1983-1985)

In 1982 São Paulo had the first openly contested gubernatorial elections since the military coup in 1964. The opposition party's candidate, Franco Montoro, won on a platform of social reforms, with significant support from low-income voters in the state's capital. Montoro wanted programs that would respond to the needs of his constituency.

He appointed a new president to SABESP and gave the agency directions to develop its own favela service extension program. SABESP's president responded by reactivating the skeletal team that had coordinated PROAGUA, replacing the old staff with new administrators tied to the new administration.[66] The team moved from the SABESP presidency to metropolitan operations division, putting it closer to engineers, and giving it more autonomous decision-making authority than it had before. Like its predecessor, the new SABESP favela team attended unserved community demands and coordinated network extensions activities at SABESP district offices. Unlike its predecessor, the new team had a mandate to address actively community demands, the governor's and the agency president's support in doing this, and desire to make an impact in the area. While this structure had already existed before 1983 when SABESP executed network extensions to favelas under PROAGUA, it was not until the state governor pushed SABESP to open itself up to community pressures that real changes came about in service delivery.

The new SABESP favela team built on the municipality's earlier experiences, adopting some of the technological innovations and construction techniques. Once in place, its programs went well beyond the scope of the municipality's pilot-like programs, tripling the number of favela households with water service.

The head of the group, Humberto Semighini, was a career engineer within SABESP, but unlike most SABESP employees, was concerned about serving the poor residents of São Paulo. Semighini shared Montoro's concerns that SABESP improve its performance in this area. Although he supported the work throughout his tenure with the team, from 1983 to 1985, he passed the favela-related coordination responsibility on to a young generalist within the group, Ricardo Araujo, who had been hired on with the new administration. Araujo had no sanitation training, having worked previously as a legislative aid with opposition party representatives, but a great deal of interest in working with favelas.

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[66]Araujo, personal interview, 1991.

Araujo spent the first part of his time with SABESP listening to favela resident complaints and demands, and learning how to negotiate with them about what SABESP could do, and what it could not. He received neighborhood association delegations at the central office, went to meetings in favelas, and attended municipal housing meetings. "We worked Saturdays, Sundays, going to these meetings. And the climate between SABESP and the favela residents was very tense. The only thing we had going for us was that we had come in recently, with a new administration, and there was a certain honeymoon period we could work in."[67] At the same time, Araujo began to develop a new SABESP program for serving favelas. As time went on, he gained legitimacy with the favela residents because he demonstrated that he was actually responding to their demands.

Community demands focused more intensely on water service than on sewer. Because a large part of the motivation for SABESP's new initiatives was to relieve pressure from the population, meeting water demands became its first priority. Also, providing sewer networks require stable soils, and since most favelas have significant flooding, erosion, and slide problems, retention walls and pavement generally needs to precede sewer network extensions. But the municipality was not doing any more urbanization projects. The new SABESP favela team therefore had to develop service solutions that were independent of any urbanization project to stabilize slopes, widen and pave roads, put in gutters, etc. This put sewer service down low on the priority list. The team leader worked with agency design engineers to develop technologies that could work in favelas. These changes were not pushed through immediately, but resulted from both low-key, informal procedural changes, and more visible, formal agency decisions.

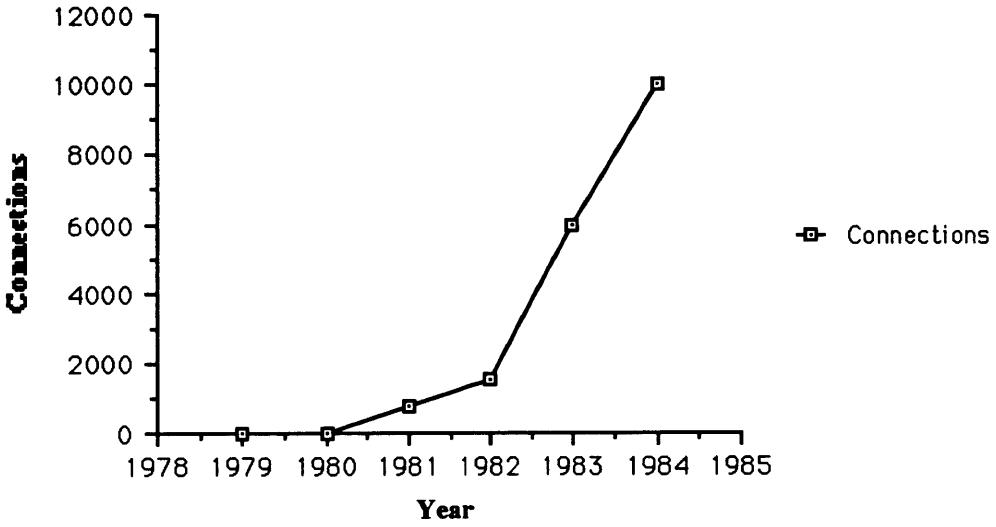
Araujo's first decision was to reduce street width requirements from four meters to three meters. Whereas EMURB had informally accepted 3.5 meters by the end of PROFAVELA, SABESP had never agreed to lower this standard, insisting that four meters were necessary for its trucks to enter a street. Araujo's decision was not based on any

[67]Araujo, personal interview, 1991.

technical rationale, but was a means for the SABESP team to "administer" the scale of demand.[68] Araujo felt that ditches can be dug on any street that was at least two meters wide, but used the three meters standard to broaden the area of agency activity. He didn't want to increase SABESP's responsibilities too much at the beginning of the program. The number of favela streets SABESP would service under Araujo's new standard went from 3,000 to 27,000.[69] (See Figure Two.) With the reduced street width requirements, SABESP began to service the interior of favelas. This was a major shift from SABESP's performance under the PROAGUA program, when it only served the houses along the perimeter of favelas.

Figure Two

INTERNAL WATER CONNECTIONS IN FAVELAS



Source: SABESP n.d.

Relaxing the requirement for official street status was relatively easy, because the SABESP favela team had a great deal of decision-making autonomy, and independent

[68]In practice, SABESP engineers served streets that were under 3 meters in width, but the standard could be held up as a reason not to serve an area if there were other reasons why SABESP didn't want to serve it, such as active land disputes, being located within the watershed protection area, or in a high risk area. The current municipal administration is executing projects along streets that have 1.5 meters in width, so even Araujo's two meter estimate was relative. The controlling factor is the technology used to dig the ditch. Manual trenching requires as little as 1.5 meters, depending on the depth of the ditch.

[69]Araujo, personal interview, 1991.

authority to direct the district office implementation staff. The new team simply chose to ignore street status as a service criteria, never bothered to check with the municipality about whether streets were registered with it or not, and never got any resistance either from the municipality or within SABESP for doing this, since the requirement was based on standards presumed necessary to allow service trucks to enter streets. When the SABESP favela team showed that trucks could enter narrower streets, the requirement became irrelevant.

There was significant resistance, however, to serving favelas on private land. SABESP already served favelas on public land if it got permission from the responsible agency, the municipality, or the state government, but rarely provided service to private land, fearing future law suits from owners. The SABESP team went beyond this policy, and approved service on all municipal, state, and federal lands, unless the favela was in a high risk area. The SABESP favela team would not approve service on private land, fearing the negative publicity this might bring if a landowner later sued the company. By the beginning of 1984, however, pressures from favelas on private land became too intense to ignore. SABESP's legal counsel opposed service on private land. The SABESP team met with agency directors and legal staff, arguing that a large percentage of favelas occupied private land,[70] the residents were not going to go away, and if the problem was not resolved, pressures from this sector would only grow. SABESP directors responded by approving service on "non-public" lands, thus giving a tacit nod of approval without explicitly saying the team should serve private lands. Thus the SABESP favela team

[70]The percentage of favelas on private land has been steadily declining since the early 1970's. 1973 favela census data show 65% of all favelas on private land, but representing only 23% percent of favela households, indicating that these favelas are small relative to those on public lands (Taschner 1982). By 1987, the next available figures, only 18% of favelas are located on private land. There are no figures for number of favela households on private land in 1987, but it is likely to be even smaller (PMSP 1989). Part of the reduction in percentage of favelas on private lands can be explained by periodic expropriations by municipal authorities to address organized favela demands. Nossa Senhora Aparecida, for example, was located on private land, and was expropriated in the early 1980's. Another explanation is that favela residents see public lands as being more secure. The political costs to government are often too high to evict residents from their own lands. As a result, people prefer to locate on public lands.

pushed the agency to act in ways it officially opposed, but that it nevertheless recognized were necessary to respond to both communities' need for service, and the governor's mandate to address these needs. Thus, SABESP instituted a major change in favela policies in a quiet, almost unofficial way. By 1991 SABESP was no longer serving favelas on private land, and there are indications that the policy stopped being observed after 1985, when Araujo left SABESP to work in a federal sanitation agency. Because the policy was so controversial, it had to be essentially informal in order to get approved. This meant, however, that it could be quickly reversed once the forces that had maintained it -- i.e. Araujo and the SABESP favela team -- were no longer present.

The final major service innovation Araujo introduced was to use of High Density Polietheline (PEAD) for water lines. PEAD made water network extension work easier because the trenches did not have to be so deep, and there were less joints to make; crews could therefore make a large number of connections in a short amount of time. But SABESP did not start using PEAD right away. While it had accepted PEAD branch networks installed by EMURB during the PROFAVELA project, SABESP had not adopted it in its own construction practices. Araujo presented PEAD as SABESP's "pioneering" innovation to favela service, while in fact the PROFAVELA project used it extensively for branch connections. Araujo's real contribution was to extend PEAD to main streets lines on streets that were less than three meters wide, and not just for branch connections to houses without street frontage. This greatly increased the number of households SABESP could serve, particularly in the interior of favelas. Araujo did not adopt this expanded use of PEAD until 1984 because he wanted to first serve the households that could be served with standard metal pipes under the already lowered three-meter width standard. Once those households were served, he then introduced the use of PEAD for main street lines, and served streets less than three meters wide.

Araujo spent a large part of his time working with SABESP district engineers to introduce the new service criteria, explain technical innovations, and coordinate favela

network extensions with the other minor extensions the district offices were responsible for. He also spent a great deal of time attending meetings with the district engineering staff and local favela groups. Araujo used the pressure of the population to spur resistant district staff into adopting the new policies. "We said to them, look, you have to serve these people. Not only because it's the policy of the government, but because if you don't, these people are going to keep trying your patience all the time. Let's resolve this problem once and for all."[71] Araujo also worked with district staff to prioritize which favelas were served first, and fit favela service into their larger work load. "I needed to have the engineers on my side. So I had to follow a time table they could deal with."[72]

Araujo wanted to address the demands based on need as well as responding to community demands. After an initial period, when the SABESP favela team served primarily those favelas that were most vocal, Araujo began to act on this concern. Some favelas already had partial service, while others had none. Unserved favelas were often less mobilized than others that already had some water or sewer service, because these were favelas that had usually been established recently, and had less time organizing and learing to develop common goals. Usually these favelas were located on the most marginal areas, like highly flood-prone river banks, and the like. Araujo gave these unserved favelas priority over favelas that already had at least some households with water service.[73] Rather than using a service criteria of serving the more mobilized favelas, as COBES and EMURB had, the SABESP favela team wanted to use a more neutral, need-based criteria. Araujo relied on the district staff to implement this policy. They had a list of unserved favelas, and worked together to decide which ones could be served, and which ones would have to wait, or could not be served at all because they were in a very high-risk area, or were involved with an active land dispute with the owner.

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[71]Araujo, personal interview, 1991. See Fox (1986 and 1990) for another example of this "sandwich strategy," as Fox calls it.

[72]Araujo, personal interview, 1991.

[73]Araujo, personal interview, 1991.

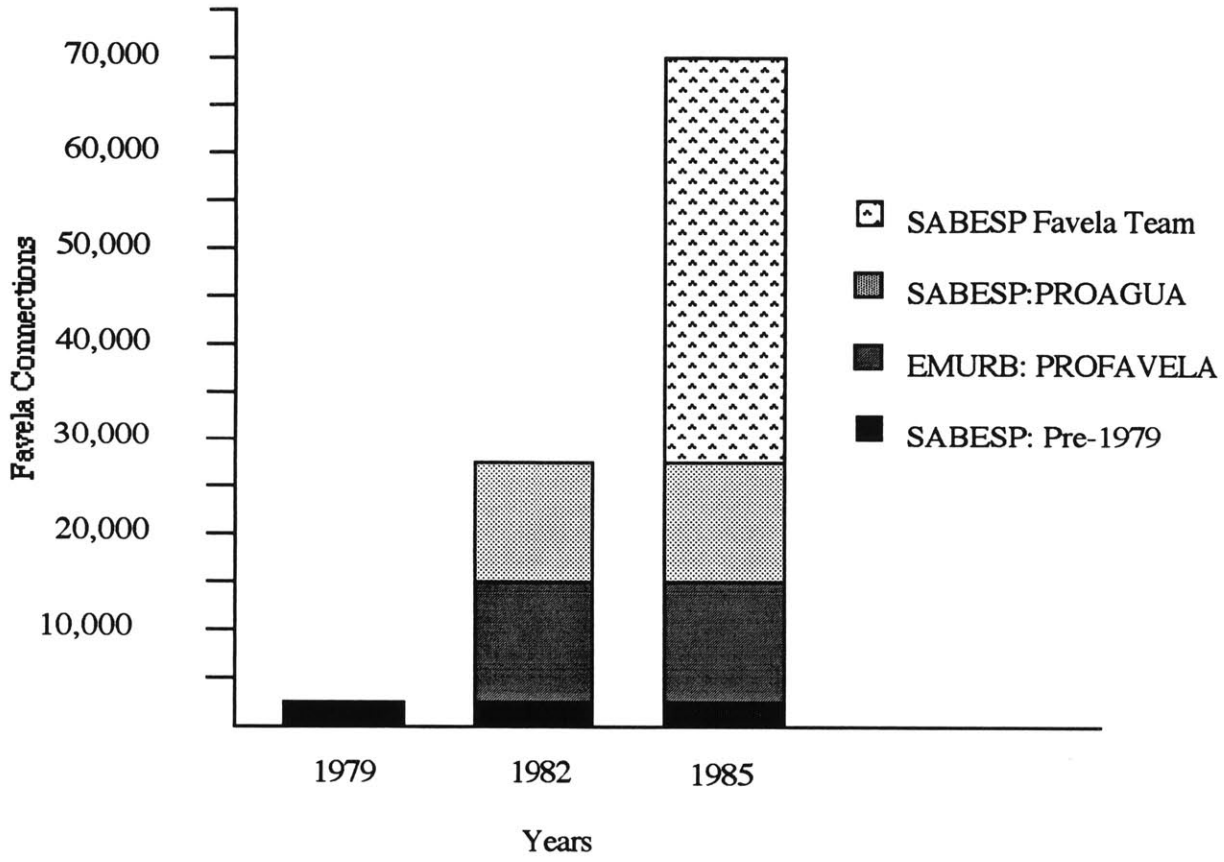
After some time, the district staff began to work in favelas without Araujo's prodding, integrating them into the normal water service extension routine. Serving favelas was no longer a "mystery" for them. Once they had mastered the new technologies and construction practices, they became quite comfortable with them. Also, once the favela residents learned that district operations staff had the authority to make the decision about whether to provide water service in their community, they began to go first to the district offices to make their demands rather than going to the central SABESP headquarters. District staff met directly with favela residents, organized their service schedules, and provided service on their own, which was Araujo's aim from the start.[74] In fact, district staff put in some network extensions where even Araujo himself would not have, such as in favelas in the median strips of major roadways, on in areas with substantial soil instability.

By the end of the SABESP team coordinator's activities in 1985, 70,000 favela households had water connections, in contrast with the 27,000 favela connections that EMURB and SABESP had made by the end of 1982.[75] (See Figure Three.) Whereas SABESP itself put in 12,800 new connections between 1979 and 1982 under the PROAGUA program, it put in 45,000 new connections under the favela team's three years of direction -- nearly four times as many. In 1987, when the municipal housing office conducted a favela census, it found that 99% of all favelas had water, at least in part. Of these favelas, 56% had water service in all households, and 43% had service in at least part of the households (SEHAB 1989).

[74]Araujo, personal interview, 1991.
[75]Araujo, personal interview, 1991.

Figure Three

INCREASE IN WATER CONNECTIONS TO FAVELAS: 1979-1985



Sources: Toniolo 1982, PMSP 1982, Araujo Personal interview 1991.

Reforms from Within

The SABESP favela team pushed through favela service reforms that nearly quadrupled past performance, by running counter to previously stated agency policies. Although the team was initially opposed by district implementing staff and some administrators as well, its small size, low-profile, and low-status activities allowed it to maneuver within the existing structure of SABESP without attracting attention, or inviting resistance from the dominant "traditional" sectors of the agency. The team's relatively

autonomous decision-making authority gave it flexibility in defining standards for favelas that would have been rejected by most agency engineers.

The small scale of the favela network extensions relative to large water storage or sewer treatment projects allowed the team to by-pass procurement procedures necessary for most major SABESP projects. Also, the advances of the 1983 to 1985 period occurred at the height of the fiscal crisis of the 1980's, when funds for large state projects dried up. The era of large-scale reservoir and treatment plant projects of the late 1970's was over, but there was enough money from tariffs to buy the cheap PEAD line, connections, and perform minor extensions. As a result, this small scale, but for favelas very significant, activity was possible.

The political pressure from the state governor and agency president, and pressure from unserved favela groups provided the two sources of support to "inside" bureaucrats for pushing reforms through despite resistance from district engineers and opposition from more conservative sectors within the agency. Pressure from above created the SABESP favela team and gave it authority to enact reforms, but the ability to enact reforms and sustain them depended on on-going pressure from favelas.[76] This pressure gave the SABESP team legitimacy in the SABESP administration's eyes because it was addressing an issue the agency leadership had decided should be dealt with. The SABESP district operations staff at first did not want to extend service to favelas, but soon learned that it was easier to provide the service than to put up with favela protests. Also, the district staff adopted the technical innovations because they were simple to execute. Reducing the street-width requirements and relaxing the requirement for official street status also significantly increased the number of favela households that SABESP could serve. The SABESP favela team made these decisions informally, but was able to implement them as standard policy for favelas because it had a large degree of autonomy from the central SABESP bureaucracy. In reality, however, the most significant breakthrough came in

[76]See Fox (1992) for similar findings.

making the district staff accountable to residents. Once the district staff began to execute favela extensions, favela groups directed their demands to the district offices rather than to the central agency. The SABESP team initiated this process both by forcing district offices to perform their first favela extensions, and by bringing district office staff to meetings with favela residents. This showed favela residents that the district staff were responsible for addressing their needs, and they quickly began to put pressure directly on the district staff. With readily available technical solutions, service had suddenly become the path of least resistance.

The favela team's reforms and their adoption by SABESP district staff had a far greater impact than those achieved previously under the much smaller but more involved and complex PROFAVELA program. Whereas the PROFAVELA and, to a lesser extent, the PROAGUA programs were limited to favelas that were highly organized, SABESP's focus was also oriented to meeting residents' needs, regardless of mobilization, though favela mobilizations drove the larger process. Rather than trying to solve all the problems in favelas, the SABESP team focused on one task -- water service -- that could be executed independently of other interventions in favelas. This eliminated the need to coordinate with other agencies, meaning that program success was not contingent on agencies outside SABESP's control.[77] Once SABESP took on the task of serving favelas, it had resources to implement reforms on a much broader scale than the municipality had. Rather than limiting service to a few favelas, SABESP implemented city-wide reforms. District operations staff already had been performing minor network extensions in favelas, so the new favela extension work represented only an incremental change. By gradually lowering service standards and introducing new materials and construction practices, SABESP managed the large scale of the demand in an incremental, but ultimately more egalitarian manner than PROFAVELA had, since it served both mobilized and non-mobilized favelas alike. As a larger, more sophisticated agency with more financial resources, SABESP was

[77]On the issue of interagency cooperation see Ostrom (1983) and Weis (1987).

better oriented to large scale, uniform service provision. Once the municipality had demonstrated the feasibility of network expansion to favelas, SABESP could then go and apply the innovations on a much larger scale, with more uniform impact.[78]

HABI Urbanization Program: a Reactivation of Constructive Competition (1989-1991)

In 1989, the Worker's Party candidate, Luiza Erundina, was elected mayor of São Paulo on a platform that included housing policy reforms to address the housing deficit for São Paulo's low-income residents. Erundina came under immediate pressure from her supporters to meet the needs of São Paulo's poor, as Nossa Senhora Aparecida's caravan to the municipal administration on its first day illustrates. Erundina brought housing policy specialists, technical advisors, and some community activists into the administration to develop a new housing policy. As part of the new policy orientation, the Division of Popular Housing, HABI, designed a specific program for favelas.[79]

HABI's Favela Urbanization Program draws extensively on COBES' PROFAVELA program of a decade earlier. By September of 1991, 30 favelas had active urbanization projects, and HABI was preparing plans for an additional 82.[80] Favelas chosen for urbanization must be located on public land, and must have a "good degree" of organization (HABI n.d.) (Appendix Two). Funding for the urbanization projects comes from the municipality's operating budget, though HABI staff are seeking foreign donor funding for some of the favelas located in watershed protection areas. There is no cost recovery for the urbanization program. HABI sees urban services as an entitlement for favela residents, and also believes that residents can ill afford the service extension costs

[78]These findings are a variation on Lipsky and Smith (1988) in their analysis of governmental versus non-governmental organizations.

[79]HABI is located within the Secretariat of Housing, SEHAB, but has its roots in the former COBES and FABES, earlier incarnations of the Bureau of Social Welfare, today called SEBES. In 1985, mayor Jânio Quadros moved the FABES staff that worked with residents who live in high-risk areas out of FABES, and put them under SEHAB, the Secretariat of Housing and Urban Development. Thus, there is actually a fair amount of continuity in personnel and agency outlook between the former COBES and the present HABI.

[80]Eduardo Marques, HABI Sanitary Engineer, personal interview, 1 August, 1991, São Paulo.

(Bonduki 1991). Like the PROFAVELA program, HABI's favela urbanization program focuses on specific favelas, and provides a comprehensive package of urban infrastructure: street widening and paving, gutters, storm drains, sewer, water, street lighting, and community spaces such as plazas and community meeting places.

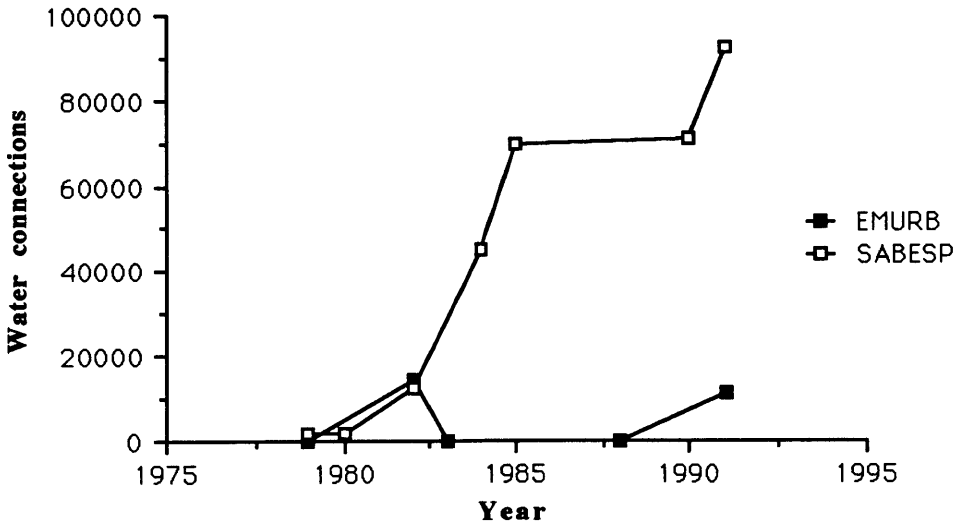
HABI's reurbanization program is different from the PROFAVELA program in two key ways. First, rather than planning and executing the project in isolation, HABI has involved favela neighborhood associations from the start in defining goals, designing new street layouts, solving the problem of houses that have to be shifted or moved to accommodate wider streets, and overseeing project execution. The Nossa Senhora Aparecida case, discussed in Chapter Three, shows of how this involvement has changed project execution. The municipality has involved residents directly in project planning and execution in response to a long-standing demand from neighborhood associations that they have control over projects executed in their communities. (See Appendix Two.) Second, HABI is focusing much more on its relation with SABESP. Water and sewer infrastructure installed by the municipality is donated to SABESP, as it was under PROFAVELA. But the HABI staff know that most of the sewer networks installed by EMURB were never accepted by SABESP because they did not conform to SABESP standards. HABI does not want to repeat this mistake, having seen the results of abandoned sewer and storm drain infrastructure, and is working much more closely with SABESP than COBES and EMURB had. HABI staff hope to reach some intermediate solution that will be technically acceptable to SABESP, and yet adapted to favela characteristics. In the mean time, HABI is going ahead with project execution, and is negotiating on a case-by-case basis on technical water and sewer standards.

This new increased interaction between the municipality and SABESP -- there has been very little since PROFAVELA and PROAGUA ended in 1982 -- has pushed SABESP to begin addressing the unresolved problems of sewerage service in favelas. SABESP has once again reactivated a small team to deal exclusively with favelas. Through the work of

this team, the number of favela water connections has risen sharply over the past two years. (See Figure Four) Humberto Semighini, now the Director of Metropolitan Operations at SABESP, is once again directing the formation of this small, specialized team of SABESP administrators and engineers. Semighini has appointed two sewer network engineers and one former district administrator currently working in cadastral database area to develop technical solutions to the sewer collection problem. While the renewed focus on favelas may be the result of heightened municipal activities in favelas, and municipal proddings, SABESP wants to develop solutions for putting sewers in favelas that are not dependent on municipal urbanization programs, or on the level of organization of the population. "If the solution depends on the favelas being organized, or on having urbanization projects, ... in the time that it takes you to develop a solution, more favelas will come in than you are able to deal with. Therefore, you need a technical way out of the problem, a solution that allows you to do a large-scale program."[81]

Figure Four

1979-1991: INFLUENCE OF MUNICIPAL FAVELA PROJECTS ON SABESP



Sources: Toniolo 1982, PMSP 1982, SABESP n.d., Araujo Personal interview 1991, SABESP 1990, SABESP 1991, Marques Personal Interview 1991.

[81]Humberto Semighini, Director of Metropolitan Operations for SABESP, and former coordinator of the 1983-1985 SABESP favela team, personal interview, 21, August, 1991, São Paulo.

Thus, HABI's favela urbanization program appears to be initiating a new, though still tentative, cycle of activity within SABESP focused on favelas. This constructive competition parallels the origins of the 1983-1985 SABESP favela team, when SABESP initiated a program that had broad impact on water service in São Paulo's favelas. At this point it is impossible to predict whether the results will be as dramatic for sewer service as they were for water service to favelas. Nevertheless, a number of factors may contributing to major advances in the area of sewer provision. First, HABI's reurbanization projects are developing new techniques -- in terms of materials, standards, construction practices, and collaboration with residents -- that SABESP may be able to adapt to a city-wide program, as it did with water service. Second, public health officials fear that the cholera epidemic will reach São Paulo and are beginning to take a new interest in favela sanitation. In the struggle to keep epidemics under control, according to Semighini, "our weak point is favelas," (Personal interview 1991). Unless SABESP eliminates the public health problems in favelas, the entire city population could easily be exposed to cholera, or other epidemics. Third, environmental concerns with ground water and surface water contamination from human wastes has also made sewerage a public issue. The current governor of São Paulo has put environmental issues on his agenda, and is trying to develop a program to clean up the two rivers that ring São Paulo. Most of the pollutants in these rivers comes from untreated sewers. While approximately 60% of household sewer wastes are collected in São Paulo, only 10% of all wastes are treated (PMSP n.d.). The rest of the waste goes into streams and storm drains, and ends up in the rivers. The governor's interest in water quality is linked to household sewer collection, because households that are not connected are discharging their wastes directly to São Paulo's rivers. And finally, the grassroots health movement in São Paulo is creating a groundswell of public concern about the hazards of uncollected sewage.[82] Neighborhood associations had already made

[82]See Cardoso (1989b) for a detailed history of the development of the São Paulo health movement and Jacobi (1990) for a more current treatment of sanitation issues.

the connection between health and open sewers by the early 1980's, as in the Jardim Damsceno case. But a city-wide, organized push has only emerged recently. The pressure that this mobilization could put on SABESP officials may be enough to spur it into action.

Conclusion

Constructive competition from the municipal Bureau of Social Welfare and the Municipal Development Agency generated the first, though modest, advances within SABESP in serving favelas in São Paulo. These municipal agencies prodded SABESP into action by demonstrating that even these less-well endowed agencies could extend service where SABESP had previously refused to, and by negotiation with SABESP to accept the newly installed network. COBES had a service orientation that made it highly sensitive to favela resident needs, unlike the engineering-oriented SABESP, which initially resisted favela demands and municipal requests for cooperation. Reformist policies of São Paulo's mayor provided a window of opportunity for COBES staff to develop the first formal water and sewer programs in favelas, PROFAVELA and PROAGUA (1979-1982). These projects responded to, and were pushed forward by community protests.

In 1983, the progressive political mandate of the state governor provided the political opportunity for reformist bureaucrats within SABESP to initiate their own network extension program. Because it was small, relatively autonomous, and low-profile, the SABESP team was able to initiate a service program for favelas that ran counter to stated agency policies. At the same time, its location within SABESP was crucial, because it could make use of the agency's technical, financial, and logistical resources, and have a much broader impact than the municipality's program. The technical and service solutions used by the SABESP team drew on the municipality's innovations and were simple enough for SABESP district engineering staff to adopt them easily. Because of this, and because the approach was limited to tasks the agency could do alone, program success was not contingent on cooperation from outside agencies. The SABESP favela team avoided

resistance from conservative sectors within the agency because it performed minor network extensions that were inexpensive relative to the large water and sewer treatment projects the agency had focused on in previous years. Ongoing protests from favela residents provided a constant pressure on SABESP administrators that gave legitimacy to the favela team's efforts. The favela team redirected community protests towards district operations staff, who quickly found that implementing the new service practices in favelas was easier than putting up with noisy and disgruntled citizen groups.

Between 1989 and 1991 a similar pattern of constructive competition seems to have developed, with the municipal housing office, HABI, developing new favela urbanization projects, and pressing SABESP to once again negotiate over network standards and maintenance responsibilities. This, in tern, has spurred a renewed focus within SABESP on favelas, specifically in the area of sewers. As in the earlier case, the new urbanization projects were initiated by a progressive mayor who is concerned with housing and public health problems of the city's poor, unlike SABESP administrators who by-and-large focus on fiscal and engineering issues. Although it is too early to tell whether SABESP's response will be as impressive as its earlier water program, the parallels with the earlier period give hope.

CHAPTER FIVE

CONCLUSION

The story of how community pressure finally changed the way SABESP approaches irregular settlements reveals much about about why some agencies are more sensitive to excluded community's needs than others, and what conditions enable them to take action. The pathways that community pressure took to SABESP were circuitous, involving many more players than just the communities and the primary service provider. Community mobilizations in São Paulo succeeded in fostering increased service delivery to favelas and illegal subdivisions, but not because community protests transformed a non-responsive agency into a responsive one through sheer force. After all, years of protests, petitions, and sit-ins directed at SABESP had achieved next to nothing. Rather, the real success of community mobilizations was their ability to indirectly pressure SABESP through other agencies and political actors. Municipal agencies and the state governor pushed SABESP into providing service to irregular settlements. The municipal agencies, by prodding and by example, challenged SABESP to be more responsive. The governor directed SABESP to serve the communities it had previously ignored -- communities that were a large part of his constituency. Once these outside pressures forced SABESP to respond to user needs, community demands began to have an impact within the agency itself.

Community mobilizations in São Paulo effectively influenced agency policies through non-institutionalized, periodic waves of mobilization, and through an increasingly collaborative engagement with service providers. This is quite different from the new social movement literature's view of what is necessary in order for movements to transform government policies, that is, permanent, city-wide movements with increasingly

contestatory and political demands. Mobilizations pull back after receiving services, consistent with the NSM critique of urban service mobilizations, but yet are able to mount successive mobilizations when crises erupt or when opportunities emerge. Also, during the "demobilized" periods neighborhood activists -- and women in particular -- continue to work on less-visible community issues like healthcare, childcare, and education. Women's ongoing involvement in the day-to-day work of the community creates continuity in leadership, maintains a latent capacity for demand-making within the community, and continuously develops their skills for interacting with agencies. As a result, while water and sewer struggles may not form permanent, unified federations, or develop increasingly "political" demands, they have a high degree of continuity and tenacity, which allows them to put pressure on agencies at key junctures and ultimately shape agency policies.

The NSM literature argues that mobilizations must be autonomous from government and political parties, and contestatory, challenging government policies. When they are not, this literature argues, they are vulnerable to clientelistic and dependent relationships with service providers and politicians. Yet neighborhood associations in São Paulo do not fit either of these two categories. Though neighborhood associations continue to protest lacking or faulty services, they are learning to collaborate in service provision, which allows them to have much more control over project outcomes by participating in the planning and management of projects. Rather than being captive to agency or political interests, neighborhood associations are learning how to engage with government agencies to provide services that would not be possible without some form of collaboration.

While SABESP is responsible for providing water and sewer in São Paulo, and is a large and technically sophisticated agency, it was a small, multi-purpose municipal agency, the municipal Bureau of Social Welfare, COBES, that first responded to favela residents' demands for service. Why was this so? First, the COBES staff's professional identity as social service and housing specialists made them more sensitive to excluded community's needs than SABESP engineers, who were more concerned with the technical and financial

aspects of network extension, and resisted serving favelas because they are illegal land occupations. Second, COBES already worked closely with at-risk populations, which made it aware of the problems residents face in favelas. And finally, because COBES worked on housing issues related to at-risk groups, it saw the importance of sanitation in a much broader perspective, unlike SABESP's limited engineering-based perspective.

With the help of the Municipal Development Agency, EMURB, COBES developed favela urbanization projects that pioneered water and sewer service strategies that solved many of the technical problems of serving favelas. COBES was able to take this initiative because a populist mayor directed it to develop a program that would benefit his low-income constituency, which was becoming increasingly mobilized. Because SABESP is oriented towards uniform, city-wide service standards, it is less equipped to take on the task of developing new, and differentiated technical solutions. COBES and EMURB, in contrast, focused on small, detailed neighborhood-specific projects where they could experiment with different approaches, perfecting their technique as the projects progressed. Yet while COBES and EMURB were good at developing new service approaches, they were not able to implement their innovations on a city-wide level because they were trying to do many things at once -- water, sewer, electricity, streets, storm drains, retention walls, and the like -- and also because they did not have the financial resources to replicate the project in all favelas.

Once SABESP began to extend service to favelas it had a much larger impact. SABESP built on the municipality's innovations, but largely limited its work to one task -- providing water -- that it could do without relying on other agencies, and for which there was a readily-available technical solution, developed by EMURB. Because SABESP is a large, specialized agency, it was able to apply its favela program throughout the city in a uniform manner using the agency's technical, financial, and administrative resources. As a result, SABESP's work in favelas reached many more people than the municipality's pilot-like programs had.

SABESP's initial resistance to serving favelas was turned around through the work of a small, low-profile group that was created in response to directives from a new state governor to serve favelas. The governor's support for favela service provided a window of opportunity for reformist bureaucrats within SABESP to push through reforms that were resisted by agency technical and administrative staff under earlier administrations. The SABESP favela team pushed district-level implementation staff to execute extensions in favelas by redirecting community group protests away from the central agency, and towards the district offices. Once communities began to take their protests to the district offices, there was constant pressure on them to extend new services to favelas, and adopting the new service strategy became easier than putting up with the protests.

In 1989 the Municipal Housing Agency, HABI, initiated a second favela urbanization program under the direction of a progressive mayor elected that year. Like its predecessor ten years earlier, HABI's program serves a limited number of favelas with a comprehensive array of urban services. Unlike the earlier programs, however, HABI is involving extensive community participation in the planning and management of urbanization projects. While residents are not performing actual construction tasks, they are monitoring construction crew performance and facilitating construction by mediating between residents and the agency. This collaborative engagement with the service provider makes negotiating difficult construction-phase issues, like moving lot lines and relocating residents, possible. In addition, neighborhood associations are presenting alternative solutions to service problems that expand and redefine agency's responsibilities to make them more appropriate to residents' needs. The planning literature on community participation stresses the importance of community involvement in construction tasks because this reduces costs, and makes residents care more about the finished product. The São Paulo case, however, indicates that neighborhood association's most significant contribution is in managing the relationship between the service provider and community residents. The physical tasks are often better left to trained and paid implementation staff.

The municipality's current favela urbanization project has sparked renewed attention within SABESP to issues that were never fully addressed by the earlier SABESP favela team, specifically sewer provision. While it is too early to analyze the results of this heightened level of activity within SABESP, it seems that an earlier process is being repeated, where SABESP is prodded into action by the initiatives and technical innovations of a smaller, and technically less-sophisticated municipal agency. This phenomenon runs counter to much urban planning and public policy literature, which suggests that projects do best when they are located within the most appropriate agency -- water projects belong in water agencies, and housing projects belong in housing agencies. In this case, while SABESP is by far better endowed to perform water and sewer extensions, the municipal housing and social service agencies have been better suited to the task of discovering new ways of reaching difficult service customers. Though once a successful approach has been developed the larger, more specialized agency can implement it on a large scale, the initial trail-and-error process needed to develop the approach in the first place is better done by an agency that cares about the project beneficiaries, and is skilled at working with them.

In sum, community mobilizations were crucial in getting water and sewer services in irregular settlements, but were not sufficient to bring about institutional learning within SABESP. Rather, pressure from community mobilizations was channeled through the more receptive municipal agencies -- COBES, EMURB, and HABI -- and through elected officials -- two mayors and the state governor -- that in turn put pressure on SABESP to improve service delivery. For their part, the receptive agencies and political figures were able to respond to community demands because of the larger political liberalization process, or *abertura*, which was initiated from within the military regime and fueled by growing citizen mobilization. The São Paulo case reveals a much more heterogeneous and complex picture of government than either the infrastructure and economics literatures, or the new social movements literature describes. It indicates that making agencies more responsive to excluded communities is not so much a matter of getting the prices right and privatizing, or

community participation, per se, but instead involves finding those agencies, or subgroups within agencies, that want to improve services, and enabling them to take on the task.

APPENDIX ONE

Neighborhood Profiles

Below is a brief description of the three neighborhoods I investigated during this study. While the three neighborhoods are quite different, they share a number of characteristics. I chose all three of them because they are examples of neighborhoods that have a history of active mobilization, and a significant legacy of successes. They represent the range of neighborhoods -- favelas and illegal subdivisions -- I address in my study. One of the neighborhoods, Vila Arco Iris, stands out from the others because it is a new settlement, and does not have the same history of mobilization tied to one location the others do. Instead, the mobilization there began while residents lived in a squatter settlement at another location. Nevertheless, the similarities among the three cases are quite striking. Jardim Damsceno and Nossa Senhora Aparecida are older communities with well-established community organizations.

After the neighborhood profiles there is a series of maps of São Paulo which show the case neighborhood locations, and the growth of squatter settlements over time in the various subdistricts of São Paulo.

Jardim Damasceno

A subdivision of approximately 1,000 households, Jardim Damasceno was established in 1972. Located at the northern edge of the city on hilly terrain with weak soils, Damasceno is prone to erosion, slides, and flooding in the lower areas. The original landowner defaulted on infrastructure, providing no paved roads, retention walls, water, sewer, or street lighting. In approximately 1975 Damasceno passed hands to a development firm that installed minimal and shoddy infrastructure. Shortly after, the municipal government declared Damasceno an illegal subdivision, and ordered the development firm to execute new infrastructure projects. Some parts were urbanized

through a municipal program for illegal subdivisions, Pro-Periferia, as a result of active community demands. SABESP installed water service in 1980 after years of active community protest (Jacobi 1989). Because of accentuated topography, however, water pressure was insufficient to reach hilltop residents. The municipality approved the subdivision in 1981 after urbanization was completed.

In 1983 a major rainstorm caused landslides that destroyed 15 houses. Technical studies by the municipality and protests from the community brought another round of municipal construction projects to prevent slides. In the mid 1980's community demands for adequate water pressure forced SABESP to improvise a solution, leading to excessive water pressure in most of the neighborhood. Significant amounts of water, lost through leaky connections, seeped into soils and added to the erosion problem. Rains, exacerbated by this constant infiltration and uncollected sewage runoff, caused a second major slide in 1991, which left 100 houses damaged, one destroyed, and three children dead. Renewed community outcry brought in a third series of municipally-sponsored recuperation projects. Currently community mobilization focuses on reducing the excess water pressure, and on getting sewer hook-ups for all residents in order to eliminate the infiltration and erosion problems.

Nossa Senhora Aparecida

A favela of approximately 500 households, Nossa Senhora Aparecida was first settled in the early 1960's on private land in the eastern region of the city. Located in a gully next to a landfill, it slopes moderately to severely in parts, and is subject to flooding in the lower areas. Neighborhood association leaders used ties to the municipal administration to gain some significant improvements in the favela in the early 1980's. The municipality expropriated the land at that time, providing residents with a margin of tenure security. The municipal land development agency, EMURB, then installed water, sewer, electricity, storm drains, and public lighting shortly after expropriation. Sewer and storm

drain networks, however, were faulty and never functioned fully. This problem was not addressed until 1989, when the community successfully lobbied the municipality to be included in a reurbanization program. The Municipal Popular Housing Office, HABI, is currently replacing all water, sewer, storm drain, and electricity networks, and is providing first-time installation of pavement, retention walls, and community open spaces through this reurbanization project. The neighborhood association and HABI staff are conducting project oversight and management jointly.

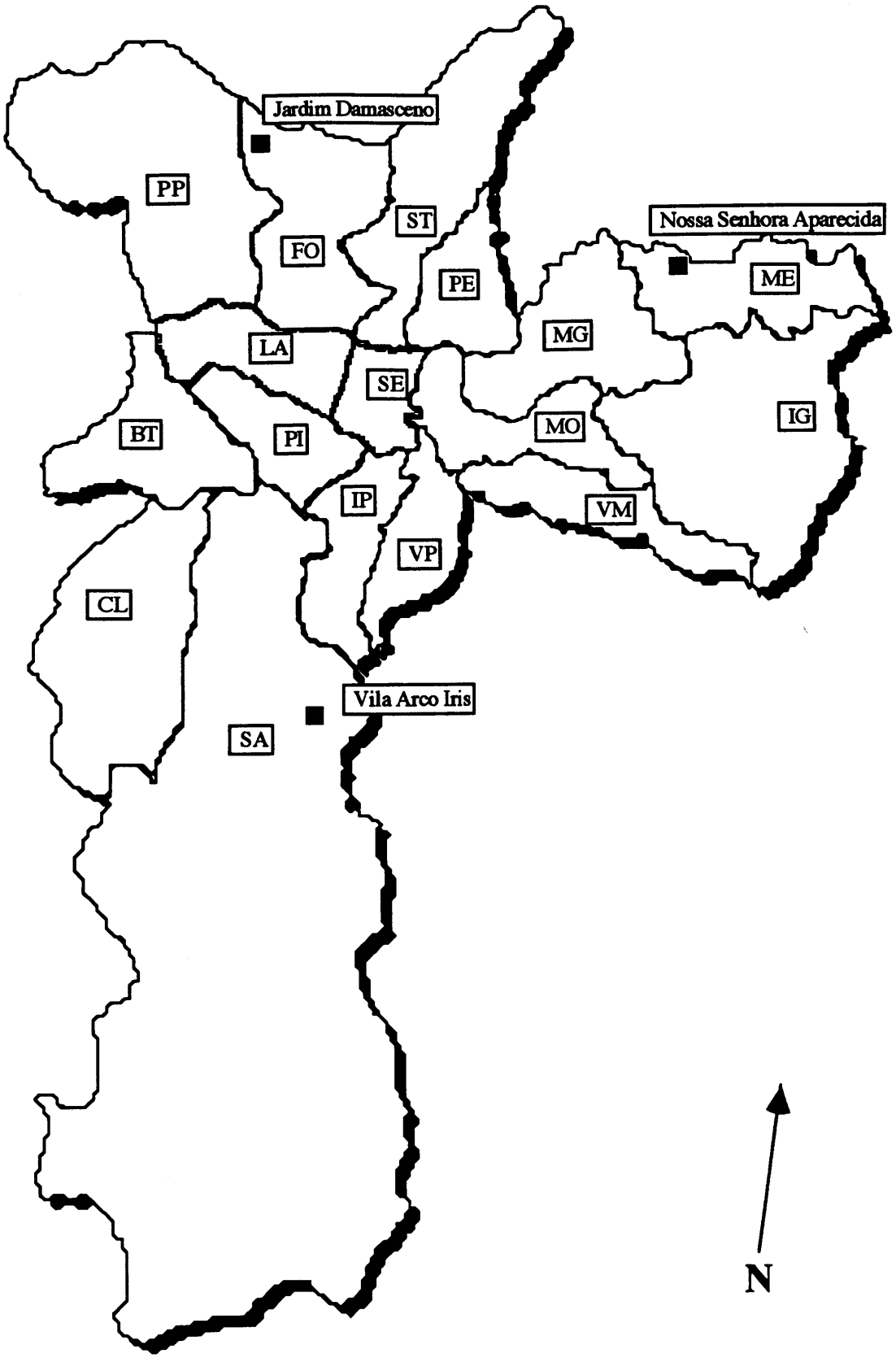
Vila Arco Iris

A self-built neighborhood of 82 former favela households, Vila Arco Iris is located in the southern region of São Paulo within a watershed protection area.[83] Residents -- about 80% of them women -- began construction in 1989 with help from the University of Campinas architecture department and with funding from an international, non-governmental, evangelical organization. Most houses are now complete. The state public housing development agency, COHAB, originally purchased the land from the private owner in order to build public multi-family units. COHAB later ceded the land to the Vila Arco Iris neighborhood association after favela movement mobilization to get access to the land. The settlement design conforms to watershed protection laws for household density and open space. No sewer hook-ups have been permitted because of a moratorium on all hookups within the watershed protection area until SABESP develops treatment capacity for the region. Households are on a communal septic system. Water service is available for the community center only. SABESP will not approve additional household connections until it increases water storage capacity in the region. In the meantime,

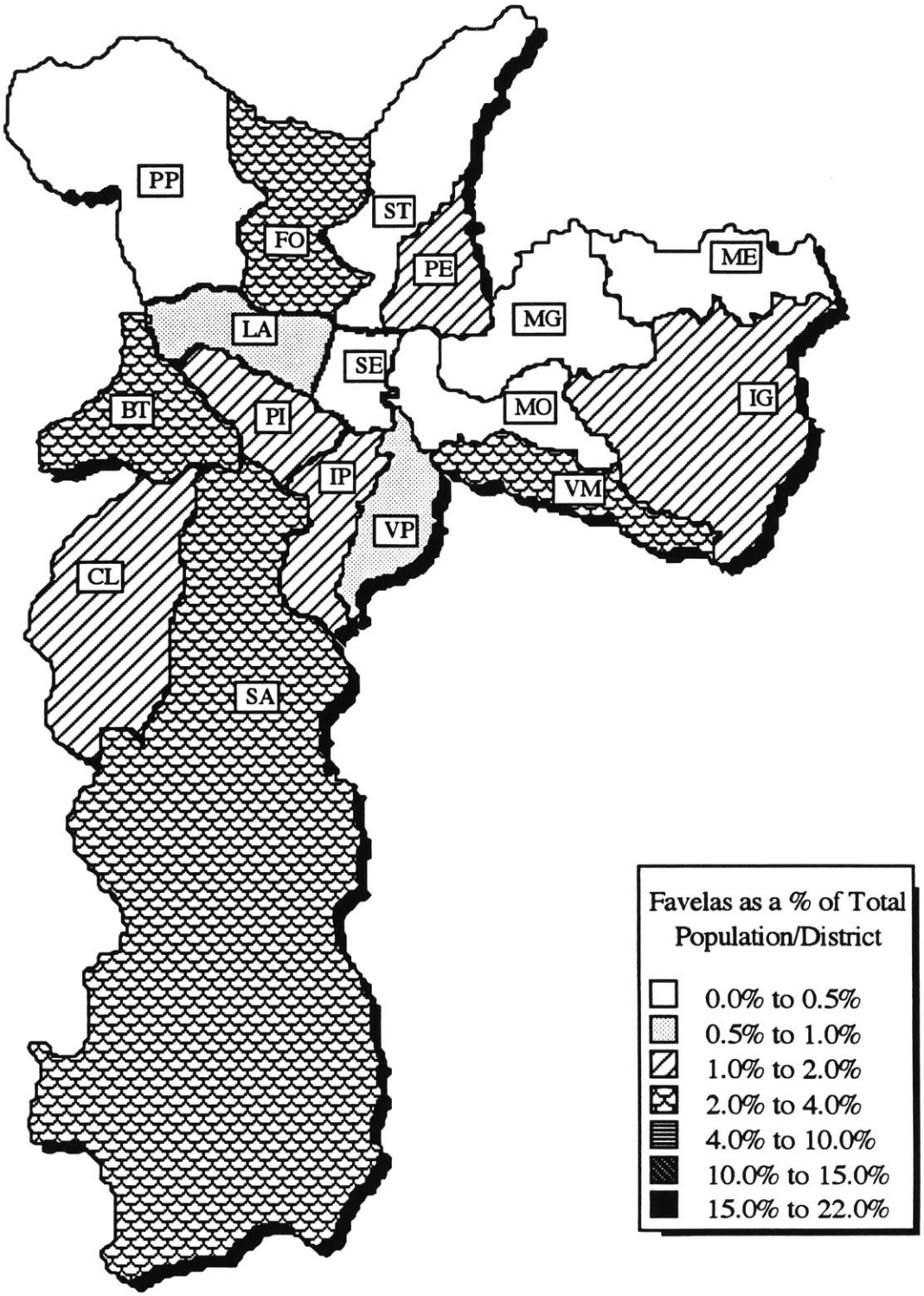
[83]The current watershed protection area dates back to 1976; it aims to protect the river basin feeding into two adjacent reservoirs. One reservoir, Guarapiranga, provides approximately 24% of São Paulo's drinking water. The other reservoir, Billings, receives contaminated river water from São Paulo, which has been pumped up stream into the reservoir. Billings water is pumped over the coastal range to Cubatão, where it generates electricity for petrochemical industries. Vila Arco Iris is located within the Billings watershed.

unserved members of the community "borrow" water from the center, or directly from SABESP lines. The current struggle for water focuses on lobbying SABESP to complete the new regional water storage project. Sewer service is resolved for the moment, though the community would prefer to have a stand-alone sewer treatment facility on site.

SÃO PAULO, BRAZIL: NEIGHBORHOOD LOCATIONS

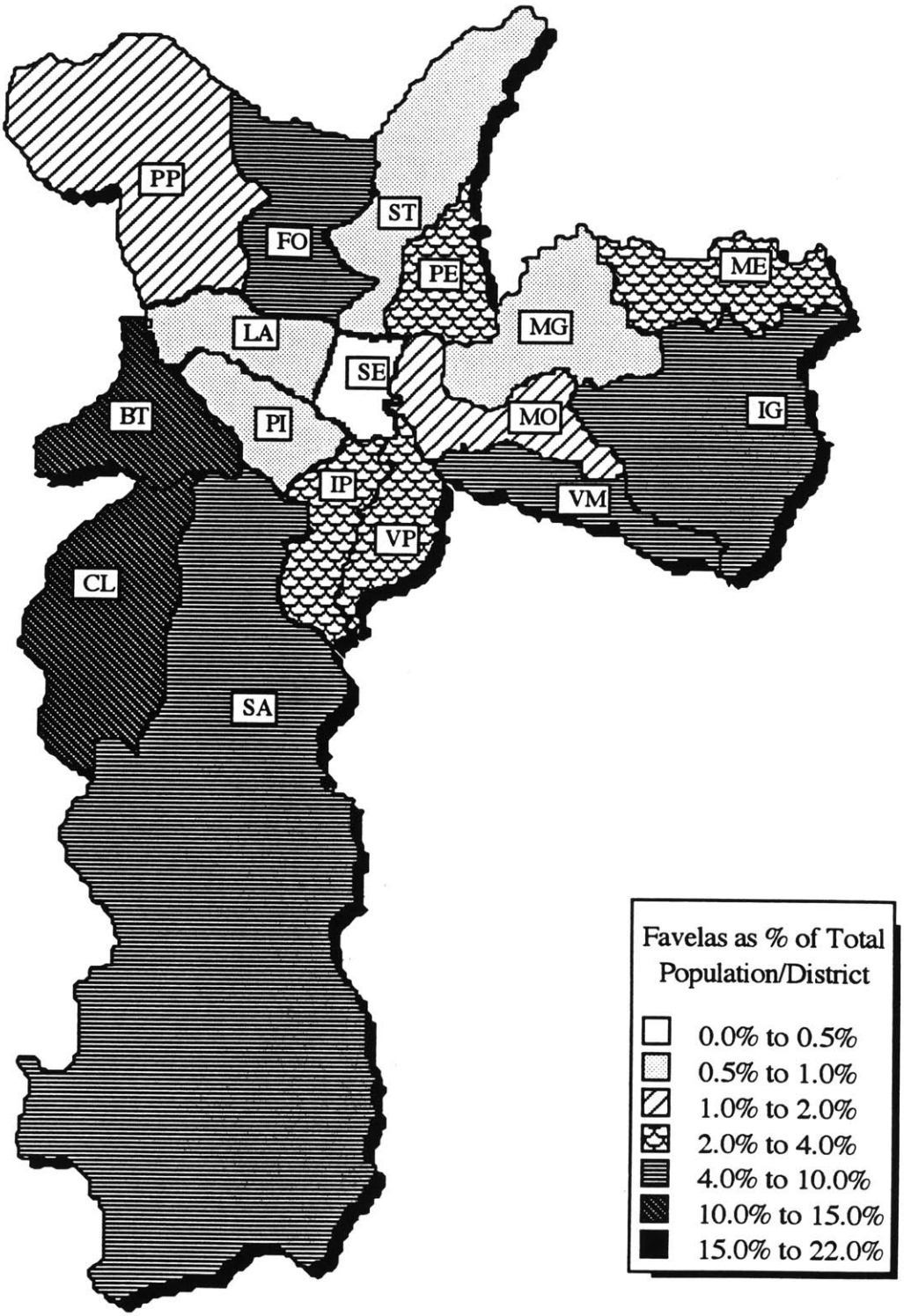


FAVELAS IN SÃO PAULO, BRAZIL: 1973



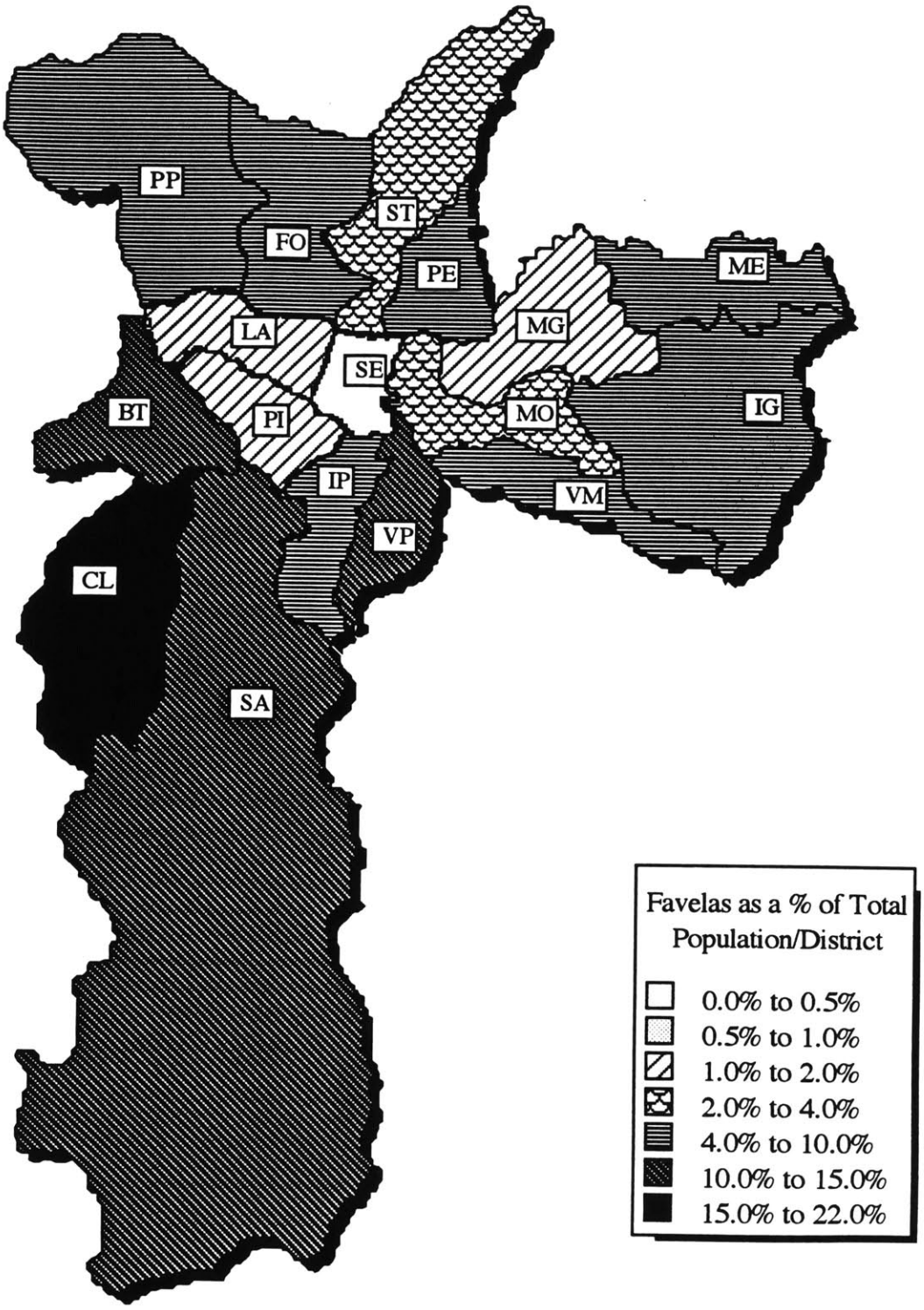
Source: PMSP 1974

FAVELAS IN SÃO PAULO, BRAZIL: 1980



Source: Taschner 1982

FAVELAS IN SÃO PAULO, BRAZIL: 1987



Source: PMSP 1989

APPENDIX TWO

PARTICIPAÇÃO POPULAR NA SECRETARIA DE HABITAÇÃO E DESENVOLVIMENTO URBANO/ SUPERINTENDÊNCIA DE HABITAÇÃO POPULAR

A Superintendência de Habitação Popular - HABI da SEHAB, que desenvolve programas de habitação popular para a população residente no Município de São Paulo, compreendida na faixa de renda familiar mensal de até 5 (cinco) salários mínimos.

Estima-se que para essa faixa de demanda proveniente principalmente de favelas e de habitação precárias de aluguel existia uma carência habitacional de cerca de 4 milhões de unidades.

Esta população constitui a demanda potencial da ação deste orgão dando-se prioridade ao atendimento das reivindicações dos movimentos organizados de luta por moradia e de urbanização de favelas e famílias em situação de risco.

Os programas em execução por esta Superintendência são os seguintes:

1. Favelas: regularização fundiária de favelas localizadas em terras públicas.
2. Favelas: projetos de urbanização e obras de infraestrutura.
3. Produção Habitacional: lotes urbanizados.
4. Produção Habitacional: financiamento de material de construção.
5. Produção Habitacional: conjuntos.
6. Produção Habitacional: cortiço
7. Assistência jurídica aos moradores em favelas e cortiços.

A habitação popular é hoje em São Paulo o problema que mais mobiliza e organiza os movimentos sociais, num permanente processo de reivindicação ao poder público. A política habitacional implementada por HABI parte do pressuposto que é impossível desenvolver uma intervenção bem sucedida na área da habitação de interesse social sem contar com um processo permanente de participação popular, em todas as etapas do desenvolvimento dos programas. Isto vem acontecendo de maneira permanente e sistemática, malgrado a enorme dificuldade de definição de um canal institucional de participação aceito por todos os movimentos de moradia. Em todos os programas de HABI a participação popular está presente: na indicação de terras, na discussão das diretrizes dos projetos ou programas, na guarda dos terrenos para evitar ocupações, na construção das casas, na administração de empreendimentos autogeridos, na cons

trução de alojamentos necessários para viabilizar a urbanização de favelas , na implantação de pequenas obras de infraestrutura em favelas, na luta para aprovar projetos de lei de interesse para o problema da habitação e definição das demandas dos projetos.

Não resta dúvida que a vasta abrangência da intervenção de HABI está intimamente ligada a este permanente processo de participação, que contribui inclusive para baratear os custos unitários dos projetos e ampliar a reduzida capacidade operacional do órgão. É importante apontar no entanto, que este processo de participação e o sem número de situações de forte confronto e pressão dos movimentos criam um cotidiano de trabalho tenso e permanentemente submetido ao questionamento. Este processo criou uma carga de trabalho adicional de reuniões, assembléias e respostas a manifestações que consomem uma quantidade muito grande do tempo dos técnicos. Por outro lado, a permanente participação popular na definição das diretrizes dos projetos cria um elemento muitas vezes retardatário dos cronogramas, afetando, assim, metas e prazos, sem que represente aspecto negativo pois garante um resultado qualitativo que não pode ser menosprezado.

Em função desta situação específica da questão habitacional e considerando as orientações gerais da atual administração municipal, são as seguintes as diretrizes da ação de HABI em relação ao movimento popular:

1. Garantir sempre a autonomia dos movimentos em relação à administração municipal.
2. Estimular a formação e o fortalecimento dos movimentos populares evitando, sempre que possível o atendimento atomizado e disperso.
3. Estimular a politização dos movimentos, buscando expor sempre as origens do problema de moradia, sua abrangência, as atribuições das diferentes esferas de governo, visando demonstrar as limitações do poder municipal.
4. Garantir a participação dos movimentos nas diferentes fases de desenvolvimento da política habitacional do município, desde a formulação dos programas até a discussão de cada projeto em particular.
5. Criação de canais de participação abertos a todos os movimentos, independentemente de opções partidárias, ideológicas ou religiosas.

6. Estímulo a formação no âmbito dos movimentos de uma perspectiva auto-gestionária, buscando superar a visão exclusivamente reivindicatória.
7. Incorporar sempre que possível a força organizativa dos movimentos como um elemento dinamizador para a implantação de projetos ou programas habitacionais.

A ação de HABI tem possibilitado uma integração constante com os movimentos, que se manifesta em diferentes esferas de atuação. Como mais importantes podem ser citadas as seguintes:

1. A participação do movimento em todo o processo de elaboração do projeto de lei que objetiva garantir a concessão do Direito Real de Uso para as favelas, ainda como de uma maneira geral nas diretrizes de todos os programas de HABI.
2. Criação do programa FUNAPS Comunitário, com financiamento concedido diretamente a Associações Comunitárias para a construção das moradias em mutirão.
   Com este programa se estimula a auto-gestão, transferindo-se recursos para os próprios movimentos se encarregarem de administrar o empreendimento da construção das casas. Estimula-se também o surgimento das assessorias técnicas autônomas, que são remuneradas com recursos do programa.
   Definimos as associações comunitárias, como uma forma de organização da população para enfrentar o problema de falta de moradia. Propõe realizar a construção das casas assumindo o gerenciamento do empreendimento desde o projeto, até a construção das habitações, utilizando inclusive a sua força de trabalho para obter uma habitação mais próxima das suas necessidades reais.
   A Associação Comunitária possui organização independente do poder público, regulamentando-se com base em estatuto próprio, podendo acessar o financiamento do FUNAPS COMUNITÁRIO, desde que seus associados enquadrem-se nos critérios sociais dos financiamentos administrados pela Superintendência.
   A Associação Comunitária trabalhará em regime de auto gestão, ou seja, será responsável pela aplicação dos recursos envolvidos na obra e no projeto.

Os critérios de relacionamento interno da associação, sua organização para as atividades da obra, seus critérios para a distribuição das unidades acabadas dentre seus associados (mutirantes), seu regulamento de convivência, etc., são estabelecidos pela própria comunidade, que deve também garantir sua aplicação.

3. Desenvolvimento de obras de melhorias ou urbanização de favelas em regime de mutirão, onde a participação moradores é essencial para a implantação dos projetos.
4. Discussão das diretrizes de todos os projetos de provisão de lotes ou moradias com a população demandatária, de modo a evitar a definição de soluções urbanísticas ou arquitetônicas sem a participação do futuro usuário.
5. Reuniões com representantes dos Movimentos de Moradia da cidade, para discussão de temas gerais, dentre os quais: Lei Orgânica, Plano Diretor, Orçamento Programa, Reforma Tributária, Conselho Municipal de Habitação.
6. Criação dos fóruns regionais de habitação, que poderiam também ser denominados Conselhos Regionais de Habitação, onde se discute as diretrizes da política habitacional do município e se define os critérios de atendimento a nível regional. Formado por representantes de todos os movimentos presentes em cada região, o fórum é uma instância da administração(não se confunde nem substitui instâncias de articulação do movimento popular) onde os movimentos são chamados a participar da política habitacional do município, evitando-se o atendimento atomizado. O fórum é uma instância de caráter consultivo, mas suas deliberações têm grande peso nas tomadas de decisões em HABI, tem se tentado criar ainda um Conselho de representantes populares junto ao FUNAPS, com um representante de cada fórum regional.

Os Fóruns Regionais de Habitação foram criados regionalmente conforme a organização administrativa regionalizada de HABI, em estágio diferenciados de organização e consolidação.

O processo de construção dos Fóruns não definiu com precisão o caráter, critérios de participação e representação, atri-

buições, periodicidade e divisão territorial, o que dificultou sua implementação e a própria relação com os Movimentos levando à necessidade de se repensar a instância de participação popular nesta Secretaria.

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→ Apresentação no Forum Inter-secretarial do PIEP em 28/11/90 por Gisela e Mª do Rô.

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