Cities in the developing world
Linking global and local networks

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Abstract Notes how rapid urbanization is transforming the developing world – creating cities, which on the one hand offer opportunities for global economic activity, but on the other hand are beset with serious local civic, economic and social problems. New networks based on information and communication technologies are increasingly being woven into the fabric of these cities supporting the connectedness of powerful groups both within the city and between cities around the world. These flows of global information and communication between powerful groups in the city involved in global economic activity coexist with intense face-to-face interactions at the local level. Bangalore in South India presents a major case study of this global/local interaction, being a focal point for software development in the Asian region and globally, but also beset with local problems of civic deficiencies, growing poverty and income inequality. Examines two Bangalore networks which typify global and local duality: the network of software firms located in high technology enclaves in and around the city, and the ostracised network of the slum dwellers of Bangalore, gradually being brought into mainstream discussions of governance in the city. Finds considerable similarities between global networks and local networks and outlines some of these dynamics.

Introduction
The survival of the community was a standard theme of old social theory. Research was dominated by investigating bonds of locality, rather than bonds that tie people to other social units (Waters, 1995; Dirlik, 1998; Apfels-Marglin and Parajuli, 1998). For example, of primary concern was the impact of industrialization on traditional patterns of life in cities or shantytowns (Waters, 1995). However, the logic of capitalism has left locality behind as a principle in the social organization of economic life. Indeed, in recent years, explanations and discourses about globalisation tend to be biased against locality and place. In most of these discourses, the global is equated with capital, space, history and the power to transform. The local, on the other hand, is equated with place, labour, tradition, indigenous people and others who are still attached to physical milieu (Dirlik, 1998).

The past decade has witnessed the eruption of place consciousness into social analysis (Escobar, 1995; Dirlik, 1998). Place consciousness refers to the recognition that however “off-ground” globalisation may appear, most of the transactions of economy activity are conducted in places, which are subject to place-based contingencies and considerations (Dirlik, 1998; Curry, 1999). For
example, Madon (1997) observes that despite the integration of organizations and workers in Bangalore’s high technology enclaves with the global economy, their ability to participate in global activities remains influenced by the local environment of their daily existence. Indeed, it is precisely because of the deteriorating standard of civic amenities and local infrastructure in the city that many international investors have recently sought to relocate their businesses to other neighboring cities, which promise to offer a more conducive and supporting local environment. Hence places have become important as major determinants of global competitiveness (King, 1995).

In recent years, many writers have attempted to think of the relationship between the global and the local in terms of processes rather than as discrete locations conceived in narrow geographical terms (Latour, 1993; Castells, 1996). For Latour (1993), the terms global and local can be more usefully conceived in terms of networks that are neither global nor local, but both. Using the metaphor of a railroad, he describes the network as local at all points because you always find sleepers, rail workers, stations and ticket machines along the way. Yet, the network is also global because it metaphorically connects Madrid to Delhi. Castells (1997) argues that the presence of a network is a dynamic and powerful entity that serves to regulate the transfer of information and knowledge. Through the example of the Zapatistas movement, Castells shows how local practices are no longer bound to place but can potentially be articulated electronically across space as a network or coalition of specific interest groups. An important point that Castells makes regarding global/local interests is that the logic of the network induces a social process of a higher level of abstraction than that of specific social interests expressed through the network such as the interests of the multinational companies, or the interests of the city’s inhabitants. This view is corroborated by other writers (Chernaik, 1996; Massey, 1994). Chernaik suggests a more complicated understanding between space and place taking into account the social categories and context which unite the global and the local, some of which will be bound to physical place. Similarly, Massey argues that place has now become a particular instance in the networks of social relations, which form the link between the local and the global. Massey’s influential analysis of places grows directly out of her study of the politics of place between global capital and local communities in England.

Places have become sites for people each of whom will be part of a unique multiplicity of lifestyles, social relations and interactions, only some of which will be focused in the local area, perhaps in the use and maintenance of certain shared facilities. Many contemporary sociologists have attempted to characterize the complex manifestation of global and local networks in physical places. Albrow (1995) characterizes relationships between people living in the same area under globalised conditions as a “disconnected contiguity” as people will be inhabiting orbits of social life, which intersect at the locality they occupy without interfering with each other. Giddens (1990) describes how the liberation of social life across time and space allows the organization of human
activity across vast temporal and spatial distances. This liberation results in the “dismounting” or lifting out of social relations from local contexts of interaction and their restructuring across time and space. The social geographer Harvey (1989) has similarly argued that the concepts of time and space in the modern era have allowed social activities which transpire in any one locality to become “disconnected” from each other.

The scope of this paper is to improve our understanding of how local sites tie into globalising networks in the city of Bangalore in the South Indian state of Karnataka. In the next section, we focus on the literature of local and global networks in the specific context of cities, with particular attention to low-income megacities such as Bangalore. In section 3, we briefly review the status of infrastructural development in the Bangalore region as a precursor to describing the manifestation of global and local networks in two contrasting environments within the city. The first environment is the network of software technology firms, which is typically perceived as being global in reach and mediated largely by electronic communications. The second environment is the network of slum dwellers in the city, amounting to some 30 per cent of the urban population, which is typically perceived as being local in reach and mediated by face-to-face communication. The co-existence of these two “worlds” within the city provides us with an opportunity to locate our discussion about the increasing attention played by global actors to the local environment, and the increasing attention focused on including hitherto marginalized groups of society into the socio-economic life of the city. Finally, in the discussion, we analyse these two environments by drawing on some of the key concepts that have emerged regarding the city as a complex nexus of global and local networks.

1. Global cities: creating and maintaining networks
As advanced transport and telecommunications infrastructure enabled economic, social and cultural activities to take place without spatial concentration, much literature predicted a progressive dissolution of cities (McLuhan, 1964; Toffler, 1980). More recently, many writers have claimed that the traditional character of cities would vanish as face-to-face contact would become substituted by electronic networks and spaces (Castells, 1989; Sassen, 1991; Castells and Hall, 1994). But at the same time, these authors have sought to reassess the importance of large metropoles as networks of key command and control centers. For example, the classic study by Sassen (1991) on the global city revealed that, apart from the joint dominance of the main global cities of New York, London and Tokyo, other world cities are also important as they make up the links in the dominant chain of global economic activity. In recent years, cities in the newly industrializing countries of Asia and Latin America have become focal points for foreign direct investments with productive capacity being channeled into a limited number of urban centers such as Bangalore.
These writers describe the process whereby a city becomes articulated into the global economy through the setting up of high technology enclaves with satellite communication systems, an international airport, luxury hotels, and other modern facilities. According to these arguments, notions of “cityness” and urbanism remain important elements in the current debate surrounding globalisation and influenced by the use of urban metaphors such as the “virtual city”, “cybercities” and “information cities”. Castells and Hall (1994) provide a typology of high technology enclaves, which they collectively describe as “technopoles”. According to these writers, the command centers of the new global economy are industrial complexes consisting of high technology firms that link research and development with manufacturing.

However, within global cities, access to global economic activity remains extremely uneven both socially and geographically (Sassen, 1994; Robins, 1999). While powerful international industries and socio-economic elite maintain and strengthen their power to link to distant places via advanced telecommunication networks, many social groups and geographical areas remain disconnected from the liberating promise of new technologies for lack of funds, infrastructure, skills, equipment, electricity, and historical reasons. These marginalized social groups coexist with the dominant forces that prevail in the city yet maintain their own networks based on face-to-face communication (Sassen, 1994; Borja and Castells, 1997; Robins, 1999). This is particularly the case in low-income megacities typical in newly industrialised countries and characterized by high and rapidly rising levels of population, and rapid rates of simultaneous growth and decline. The relational webs of the elite extend to cover international business networks, travel and tourism, and global telecommunications while the relational webs of poorer inhabitants in low-income megacities depend on place density for their articulation. These extend to cover networks or clusters of unemployment, social deprivation, criminality, and “ghettoization” which can lock cities or parts of them into spirals of decline. For these inhabitants, face-to-face contact and informal exchange might serve to reinforce alternative strategies of survival beyond the margins of the mainstream (Thrift, 1996). The urban sociologists Boden and Molotch (1994) argue that the density of cities as places is not disappearing. Rather, intense and face-to-face interactions within urban space are beginning to coexist with flows of communication and contact to the broader city and beyond.

In recent years, issues related to globalisation and localization have attracted much interest in urban studies looking at how global economic and social processes influence city structure, the built environment, and the social and political organization of the city (Graham, 1999; Robins, 1999). There has been a remarkable renaissance with international fora such as the UN Habitat Congress and OECD’s urban affairs conferences attempting to address the problems and potential of metropolitan life. National research programmes funded by the ESRC in the UK and other bodies in Europe have been established to focus on projects of urban renewal. However, much of this work has been undertaken in the context of the developed world and has placed
emphasis on western inner city decline, decentralization and suburbanisation. Far less work has been attempted to investigate the effects of global economic change on local structures in cities in the developing world.

A distinguishing characteristic of low-income megacities is that while they increasingly offer opportunities for global economic activity, they are experiencing serious civic decline and social problems. Our interest in this paper is to study the extent to which global networks which support those who participate in global economic activity are increasingly facing the need to become more localized in nature, while traditional local networks based on face-to-face communication are increasingly becoming drawn into the mainstream life of the city and beyond at national and international levels. We attempt to draw on the concept of local agency, which has so far been virtually absent from most popular and academic debates on globalisation and localization (Graham, 1999; Benjamin, 2000). According to Graham, much of the literature on cities and telecommunications assumes that local agents – i.e. local councils, policy makers and planners – are irrelevant actors from what is occurring in the global technological transformation. Hence, the potential role of local actors is often overlooked. In this paper, we study the role of local actors in the creation and maintenance of networks within the city based on data collected over a period of two years from 1998 to 2000 as part of our ongoing research project on information flows to support local governance in Bangalore. A key local agent has been the state government of Karnataka and its recent drive towards establishing a stable infrastructure in the city, which we briefly review in the next section.

2. The state of Karnataka’s infrastructure

Today, the state of Karnataka is the eighth largest in the country both in terms of its population and its area. Its capital city, Bangalore, is now classified as a megacity and has a population of over five million inhabitants (GHK, 1997). The last two decades have been a period of rapid growth for Bangalore with a proliferation of multinational companies choosing to locate their operations in the city and its environs in industrial products, consumer durables and more recently information technology.

In order to cope with the demands of new industrial activity, and to counter the threat of improvements in infrastructure from neighboring states, the Karnataka government announced its own Infrastructure Policy in 1997 (GOK, 1997a; Vishwanath, 1998). This new policy was to be spearheaded by a new institution called the Karnataka Development and Finance Corporation, which invested about US$20m in key areas of infrastructure such as power, roads and water supply. A central feature of the policy was a focus on innovative ways to finance and provide services involving the private sector in the belief that this would stimulate economic growth, which in turn would contribute to improving the quality of everyday life in the city (BDA, 1997).

The state government’s response to improving its infrastructure was especially visible in the information technology sector. Historically
acknowledged as the science and technology capital of the country, the city now has a strong telecom and electronic base. It contributes over 20 per cent of national production in electronics, about 32 per cent in computer hardware, and about one third of software exports from the country (Vishwanath, 1998). One of the key objectives of the information technology policy was to “provide an integrated and focused approach towards the development of all facets of the industry, viz, electronics, telecommunications, software and allied activities for overall economic development of the state” (Patel, 1997). Funds have been used and earmarked for the creation and further development of technology enclaves for the promotion of software and hardware exports including residential facilities for professionals (GOK, 1997b).

The state government was the initial agency involved in establishing the software technology parks. However, as the success and commercial viability of these enclaves have become apparent, many private sector (including foreign) initiatives have sprung up, each competing with the other. For example, private sector involvement is a key ingredient in the setting up of technology enclaves such as IT Park, Space City, Archana Technology Resource Park, and Cyber Park. A US$208m technology park is being financed jointly by the state government, Tata and a Singapore consortium. To reduce dependency of the park on government infrastructure, the park has its own 9-megawatt power plant, a telephone exchange, sewage treatment plant, water storage tank, health clinic and school (Ristolheuber, 1997).

In summary, the state of Karnataka is under pressure to upgrade its infrastructure. A key mechanism for shaping the government response has been to establish large infrastructural spaces to support software development, spaces that have been termed software technology parks or STPs. At the same time, these STPs are located within and influenced by the increasing proliferation of poverty and social decline in the city. In the next section, we choose to describe the two environments of STPs and slum dwellers in Bangalore because they reflect the simultaneous growth and decline of low-income megacities. By choosing these very different contexts, we are not trying to establish correlations between the two networks, but simply to illustrate some of the inherent dynamics at play.

3. Describing local networks in Bangalore

3.1. The local network of STPs

The STP scheme, which became operational in 1988, is for 100 per cent export-oriented units that are engaged either in the development and export of computer software using data communication links or involved in the export of professional services. Units being set up in the STPs are allowed 100 per cent foreign equity, and zero duty on imports of hardware and software. Several tax and excise duty exemptions are also given for domestic purchases.

The major attraction of this scheme for export-oriented units is the provision of high quality infrastructure including high speed data communication links, local loops side-stepping the dependence on local telephone companies, ready-
to-use built up space with networking and backup power, uninterrupted power supply, and common services like photocopying, fax and security. The STP also offers a single window service by KEONICS (Karnataka State Electronics Development Corporation) to STP units for project approvals, software evaluation and import certification.

The benefits of the STP scheme are not restricted to organizations physically located within the park. Indeed, a very small proportion of the companies taking part in the scheme are physically located inside the park. Export units can avail themselves of all the benefits operating from their own premises, which may be outside the boundary of the park (Rapport, 1996). This is the concept of the “virtual STP” whereby companies located within a 30-kilometre link radius can simply aim their microwave antennae towards the STP and connect to clients anywhere in the world.

A network of institutions are involved in the development and maintenance of STPs in Bangalore. At the national level, an autonomous body established by the Government of India called Software Technology Parks of India promotes export of computer software from the country. At the state level, there are a variety of agencies, which support the city’s STPs. First, there is a nodal agency called Software Technology Parks of Karnataka, which was established to coordinate the activities of STPs in Karnataka. Second, the Karnataka Industrial Areas Development Board is the primary vendor of physical infrastructure like land and buildings for the development of individual STPs. Third, KEONICs has been important in promoting the concept of an exclusive industrial area for electronic goods in the city (Srinivas, 1997). Finally, at the city level, a non-profit organization called SPIN (Software Process Improvement Network) has had significant influence in getting local software professionals together to discuss issues and experiences.

Apart from these agencies, almost all the domestic and foreign firms located in the STPs have had some form of professional contact with research laboratories or institutes in Bangalore in the last five years (Srinivas, 1997). For example, in his study of the IT industry in Bangalore, Srinivas reported that one-third of the firms surveyed agreed that these institutes provided new ideas that helped to improve their existing products or design and to introduce new products. Many firms also depended on a local network of firms (private and public sector) to carry out tests of various levels for different products. For example, a particular software company may send a test version of its product to potential client firms. Most companies located within an STP agreed that such interaction with local firms on a regular basis has helped them to adapt their products and services more quickly for global markets.

In recent years, many top executives of companies located in Bangalore’s STPs have donated personal monies towards the cause of improving civic amenities within the city. A case in point is the recently established forum called the Bangalore Action Task Force (BATF) which is a network established by the Chairman of Infosys, one of the leading software houses in Bangalore. BATF represents a coalition of representatives from government agencies,
private sector entrepreneurs, non-government organizations, and from political
circles, all of whom are striving to make Bangalore a world class city by 2005.
The BATF keeps track of developmental works of the seven key agencies
responsible for providing civic amenities in the city. An interesting feature
about the BATF forum is that the members are local Bangalore citizens who
see Bangalore as a “place” to which they have deep emotional attachment.
There is a very personal and local agenda involved in the donation of personal
monies by top industrialists as they seek to improve the environment of the city
in which their children and relatives are growing up.

In sum, activity within STPs is directed at participation in the global
economy as vendors of services. At the same time, there is increasing
recognition among captains of industry of the software firms located in the
STPs that local firms and institutes can provide a valuable degree of support to
them. Recognising the inability of the government to deal with the issue of
chronic civic deficiency in the city, key industrialists of STPs are directing their
efforts towards the improvement of civic amenities in the city through the
provision of resources and services to the public.

3.2. The local network of slum dwellers
With an overall rapid increase in population coupled with the seemingly
irreversible flow of people from rural to urban areas, Bangalore has been
acquiring unplanned and uncontrolled squatter settlements – i.e. slums. There
is very little authentic information on the number of growth pattern of slums
that are officially registered, with figures tending to vary according to the
interests of the claimant. However, a recent estimate on the number of slums in
Bangalore reported a figure of 778 slums, housing 26 per cent of the city’s
population (Jana Sahayog, 1998). There is little reliable data on the composition
of slums. De Wit’s study revealed that some distinctive patterns in dwellers’
origin were found, with certain religious, linguistic or ethnic groups tending to
display slum clustering (De Wit, 1992). De Wit found that security of tenure is a
critical factor in the initial selection of a slum habitat and that once a slum is
registered or about to be registered, increase in population density proceeds
according to religious, linguistic or ethnic bonds.

The vast majority of people living in Bangalore’s slums are fragmented from
the mainstream planning activities of the city, and are therefore subject to
tremendous hazards of poverty, inadequate health care, illiteracy and a host of
other socio-economic problems. A significant proportion of slum dwellers in
Bangalore are engaged in service activities and home-based manufacturing
(Ramachandran and Daljeet-Singh, 1997). In particular, Ramachandran and
Daljeet-Singh found that an increasing number of specialized small-scale
workshops were established within the slum boundaries in order to supply to
the high technology industries. An increasing number of slum dwellers were
indirectly servicing the formal economy as well as the high technology
enclaves by engaging in informal construction work, coolie work, hotel work,
garbage picking, vegetable and fruit vending, petty hawking, and working as
domestic servants. Informal activities are also critical for employment generation because they provide proximity to demand, to markets and to suppliers opening up opportunities for financial and subcontracting links (Benjamin, 2000).

The absence of a guarantee of tenure for slum dwellers hinders the provision of many civic amenities although several government agencies have been established to manage facilities in Bangalore’s slums. For the most part, these agencies tend to be tied to the priorities and targets imposed by the central government’s national schemes, rather than to the priorities of slum dwellers. Many NGO groups such as CIVIC and BUPP (Bangalore Urban Poverty Alleviation Group) have been working with both registered and unregistered slums in the city. Jana Sahayog is one such agency, which works to procure land tenure for slum dwellers. The NGO acts as a hub to facilitate flows of information between slum dwellers and the government. A variety of formal and informal sources are used in order to generate discussions such as official documents, constitutional acts, and budgetary allocations essentially as a resource to identify the rights of marginalized sections. It utilizes informal channels such as wall newspapers and audiotapes based on folklore to sensitise slum dwellers about their rights and to mobilize their support. The local network developed by Jana Sahayog and other NGOs working for the empowerment of slum dwellers in Bangalore is an effort to alter existing power imbalances within the city. Prior to the mediation of NGOs working for the rights of slum dwellers, basic information about slums was produced by government and was neither shared with other organizations nor made available to slum dwellers in a way that they could understand or respond to. In this way, power rested with the authorities reinforcing the prevailing norm that slum dwellers had few rights to fight for the provision of services.

In sum, with the proliferation of Jana Sahayog and other organisations, a transfer of information has gradually started to take place in the direction of slum dwellers, and vice versa from slum dwellers to government agencies and international agencies. This had the effect of realigning power structures and shifting norms, placing slum dwellers firmly within the network of key stakeholders in the city.

4. Discussion
In this section, we will try to locate our two empirical examples within the earlier theoretical discussions on megacities as complex hubs of activity. Earlier the argument we had made was that nothing is either in a completely global or completely local state. Rather, what exist are networks of relations, some of which are influenced by global processes and some of which are grounded in local practices – each affecting the other. This is because local practices are no longer confined to a place, but are increasingly articulated across space by mediators which include either other organizations or electronically. What we appear to be witnessing, then, is a hybridization of the local with the global, wherein local processes are becoming inextricably
intertwined with global influences. The result is the emergence of a hybridized form of locality in which different types of symbols, signs and information flows are embedded.

Within this broad line of thought, we discussed the special case of low income megacities in which growth and decline occur simultaneously, as an affluent minority participate in global economic activity while a substantial section of the population experience growing poverty and civic decline. Encouraged by the burgeoning development of the IT industry in Bangalore and its acceptance as the silicon valley of Asia, we discussed how the Karnataka government has been proactive in formulating policies for infrastructure development, particularly in the IT sector, and responding to the initiatives of the surrounding states. At the same time, the cycle of growth and decline experienced in the city has made the process of making this silicon valley an extremely complex socio-political-cultural-economic endeavour with a variety of unintended consequences.

Amidst these tensions, the so-called IT-led global economic activity does not appear in a vacuum – it is appearing within the contextual and historical evolution of a city like Bangalore. In the previous section, we described two aspects of this evolution in Bangalore – that of STPs and slum habitats. Relevant for our discussion in this section is the notion of local agency, discussed earlier in this paper. There are two important ways in which this notion is manifest. The first is the significant increase in global software companies located in STPs which are participating in strengthening local infrastructure and civic amenities. The second is the drive towards increasing the role of mediating agencies such as NGOs to connect marginalized communities such as the city’s slum dwellers first to local government and, indirectly, to global interests. In this respect, and particularly in the context of the urban poor, our findings support the argument made by Benjamin (2000) that poor groups are increasingly evolving complex alliances, including some with richer and powerful groups.

The role of STPs in strengthening local infrastructure
STPs represent the city’s response to the global influence of creating places wherein firms can be engaged in international commerce. The response is very local in nature, representing the age-old strategy of the Indian government to creating industrial parks in which a cluster of firms engage in manufacturing activities to benefit from economies of scale that accrue from place density. However, with STPs the imagery associated is different because it is global in nature representing global connectedness, high technology, and highspeed information flows. The global is reflected also in the kind of firms that are physically located in these parks including Motorola, Sony and Siemens, which are very global in their operations. The importance of space over place is manifested by the notion of virtual STPs to which firms can belong even if they are physically located outside the park.
Despite the preoccupation of these high technology enclaves on global processes, many firms located within these complexes are relying on local support networks. For example, the importance of local processes is reflected in the key role played by formal associations and informal groups in the functioning of the parks. Trust, based on physical proximity, becomes key in the build up of co-operation and collaboration between software firms. However, these place-based associations take on a global character in that their meetings and discussions are posted on the Web. These local interactions may also, unintentionally, open up global employment opportunities for the software programmers in the park. Spurred by the global success of the Bangalore STP, the government of Karnataka has decided to use the STP concept as a strategy to diffuse some of the development pressures away from Bangalore to nearby secondary cities in the state. In doing so, policy-makers believe that they can connect secondary cities to the global software marketplace while allowing citizens in these cities to work close to home.

At the same time, there is an increasing trend towards an active engagement of IT companies and MNCs located in STPs in local civic support projects. For example, the software company Infosys in Bangalore has recently donated vehicles and communications equipment to Bangalore police (Ravichandar, 2000). Several IT companies have shown an interest in maintaining and preserving greenery in Bangalore and, together with the Bangalore City Corporation, have come up with an innovative scheme in which public-private corporate partnerships have been formed to save greenery (Gowda, 2000). Finally, apart from financial commitment, captains of industry have begun to intervene with top politicians for the purpose of improving civic amenities in the city. For example, the WIPRO Chief Executive Officer wrote a letter to the Chief Minister to encourage him to do something about cleaning up water pipes, which have been blocked for the past 30 years despite requests and court orders to clear the blockage (Kushala, 2000). As a result of the letter, the Chief Minister of Karnataka visited the spot and the blocked pipes were cleaned within 15 days.

Local NGOs mediating between slum dwellers, government and international agencies
We witness a similar intertwining of the global and the local in the current activities concerned with slums in Bangalore. The sense of the local has traditionally been much stronger here because of the relative lack of governmental and global attention that has been paid to issues regarding slums. As we described earlier, the composition of slums in Bangalore is very place-specific, based on the social cohesion provided by religious, ethnic and linguistic bonds. At the same time, the growth of slums in the city can be linked to the economic promise that was provided by Bangalore as a global city, and the migration that resulted. Our findings provided evidence that slum dwellers are providing informal services to assist the formal sector in participating in global economic activity.
The recent involvement of a multitude of international and local NGOs in slum rehabilitation work also contributes to give these habitats more of a global character than was evident in the past. Many of these NGOs have their own Web sites, which highlight different problems being faced in the slums and the strategies being adopted to deal with them. The global attention generated by these Web sites has helped to attract financial and other support from expatriates working abroad based on the appeal of preserving the city. In the previous section, we mentioned that a key strategy adopted by Jana Sahayog is to collect and disseminate information with a view to lobbying against the apathy of the government. In parallel with its advocacy role, the NGO has initiated many locally relevant approaches towards promoting information flows amongst the slum community.

The work of agencies such as Jana Sahayog presents a particular model of mediation in a low-income megacity such as Bangalore. These agencies essentially act as a missing link between the urban poor and governing agencies as well as international lobby groups trying to facilitate purposeful negotiation between them.

Conclusion
Studying cities through networks of processes provides new insights into the globalisation process and how this is played out in particular local contexts. In this paper, we find that the changing character of cities in the global economy provides leverage for local agencies to shape the existence of cities in two directions. First, by relating global activity in the STPs more closely to activities of local firms, NGOs and research institutions in the vicinity and to issues of urban governance. Equally significant is the link between captains of industry in the STPs and the city corporation, to whom large donations are made to improve civic amenities. Second, by relating activities of slum dwellers to the socio-economic life of the city through intermediaries and to national and international groups lobbying for the rights of these marginalized communities.

In describing these two networks, we have tried to illustrate some of the complex dynamics and proactive processes taking place in a megacity such as Bangalore and which are shaping the nature of governance in the city. Our intention was not to try and establish causal connections between the two sets of processes, but to highlight their informational nature and the fact that both networks are hybridized manifestations of complex global and local processes where both need the other to exist and be sustained over time.

References
BDA (1997), Bangalore 2011 Comprehensive Development Plan, Bangalore Development Authority, Bangalore.


GOK (1997b), Information Technology Policy of Karnataka, Annexure to Government Order No. CL 162 SPQ97, dated 12/06/97.


Massey, D. (1994), Space, Place and Gender, University of Minnesota Press, Minneapolis, MN.

Ramachandran, H. and Daljeet-Singh (1997), “Structure and correlates of home-based manufacturing activities in slums: a case study of Bangalore”, in Living in Bangalore’s Slums, Faculty of Environmental Sciences, University of Amsterdam.


