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Towards effective self-help housing delivery: Contributions through network analysis in Nairobi,Kenya and Johannesburg,South Africa

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CHAPTER ONE: INTRODUCTION - A CASE FOR SELF-HELP HOUSING NETWORK ANALYSIS IN NAIROBI, KENYA AND JOHANNESBURG, SOUTH AFRICA

1.1. Introduction

Self-help remains a major mode of production of housing for low-income groups in developing countries, even though current practices are ill supported through policy and programmes, and inadequately explained in theory. In Kenya and South Africa, colonial and apartheid legacies respectively, set bases for some of the current urban housing problems. Growth of urban populations in Nairobi and Johannesburg has resulted in increase in occupational densities of inner city locations, growth of informal settlements, and inadequate formal supply of housing to meet demand, especially from the poor. As a consequence, there has been an increase in housing through various forms of self-help, whose current manifestations and dimensions are only partially explored. The study explores two such areas, namely: resources and the networks that are used to access them.

Actors and their relationships and resources, and the manner in which they are accessed, are studied in this thesis through 'a loose federation of approaches referenced as network analysis' – an expression adapted from Ritzer (1996: 423). The study aims to contribute to theories and methodologies applied to housing. Self-help housing is a mode of housing production, where the owner, 'self', mobilises his/her resources to invest in housing for own use or exchange, as opposed to housing provided for 'self' by other agencies. This type of housing production may or may not be assisted by the state, the market, civil society and/or other agents. The 'self' could be involved at different levels of housing production, either through funding, construction, or management of the housing processes. In this research, 'self-help housing' refers to both assisted and unassisted initiatives.

'Self-help housing network' is that complex system or web of relationships, among actors and agents, through which various resources such as land, finance, information, labour, infrastructure, services, technology, etc. are exchanged for the primary

purpose of production of housing through self-help (I expand this definition in Section 1.4).

In addition to explicating the afore-mentioned issues, this Chapter also outlines specific methodological issues applied to the study. It explains the case study within case study approach, including the selection of case study areas in Nairobi and Johannesburg. It also explains the comparative method employed in the study and details of research design, data collection and the overall research strategy. The last section of the chapter gives an outline of the remaining chapters in the thesis, highlighting some of the key arguments.

1.2. Political economy perspective of housing in Nairobi and Johannesburg

While South Africa differs from Kenya in economic terms, there are several human development indicators that the two share in common. While difference in resources would mean difference in capacity to fund policies and programmes, similarities may present opportunities to share lessons across the two countries.

In this section I first explain the concepts of neo-liberalism and of the state, in order then to explore some comparative socio-economic issues in Kenya and South Africa, in the context of the neo-liberal state. I then discuss some housing problems in both countries as a result of colonialism and post-colonial urban growth. I also discuss three consequences of these, namely: increase in occupational densities in inner city locations, growth of informal settlements and intensification of self-help housing processes.

1.2.1. Neo-liberalism and the state

As set out by Martinez and Garcia (in Hand-Boniakowski, 2006), neo-liberalism is a set of politico-economic policies, widespread from the 1970s that emphasised global market liberalism and free trade policies. It was a revival of classical liberalism advanced by such people as Adam Smith, which emphasised removal of controls to trade and manufacturing, abolition of government intervention in economic matters,

individualism, free enterprise and open competition. Some of the key tenets of neo-liberalism are: free markets; reduction of public expenditure; deregulation; privatisation of state assets; and promotion of individualism, rather than collectivism/communism. In foreign policy it is translated into opening up of new foreign markets. Neo-liberalism measures success through economic gain, and favours economic efficiency over mitigating labour policies. It opposes socialism, protectionism and environmentalism (Martinez and Garcia, in Hand-Boniakowski, 2006). Both Kenya and South Africa have broadly neo-liberal political economies, impacting on housing policy in specific ways as discussed in Chapter Two. This also affects the policies and attitudes towards self-help housing in both countries.

In order to understand the neo-liberal state, it is relevant to give a brief definition of the term 'state'. Wikipeadia online (2006) defines 'a state' is an organised political community, occupying a territory and possessing internal and external sovereignty that enforces a monopoly on the use of force. It normally runs through a government, but can also run without one, e.g. in the case of a dictatorship. Recognition of existence of the state by the international community is critical. This recognition enables the state to enter into international agreements with other states around trade or in respect of sovereignty (Wikipeadia online, 2006).

It is has been argued that the idea of a 'state' was a consequence of four situations: claims to 'natural' or 'supernatural authority' (i.e. God's given power to govern, in some religions, Kingdoms, etc); need to protect natural rights (e.g. right to life, self-determination, etc); social contract (to supply specific goods and services); and conflict (to protect or dominate over belligerent others). The last three tend to relate to the modern state. In addition to natural rights, it is also assumed that people have various collective needs that are best provided by the state, e.g. education, roads, housing, welfare, etc. Lastly, it is noted that state rose out of conflict, where various groups fought each other to control resources and the winning sides often imposed their domination. This is still the case for the modern state. (Martin, 1999, in Wikipeadia, online)

The state is important in the overall production of goods and services in many countries; thus it plays a significant role in production of housing. Osadci (2004)

argues that the state has a natural monopoly of production and exclusivity in access to collective resources. This is a concept he refers to as 'social monopolisation'. This monopolisation is based on mechanisms of power and coercion. He argues that the state is the only actor who can have monopoly over the entire production sector. It is because of this that the state acts as a regulatory entity at macro-economic and social level. Further, the state determines which actors play a role in production and which actors don't. Blunstchli (2000) argues that the state is also a factor of production, just like capital, labour and land.

On the question of 'who controls the state?' Bluntschli, (2000) argues that state property has its proprietors, appropriating exclusive monopolistic income. Under democracy, he argues that state property tends to be used primarily by a narrow group of top level bureaucrats and members of the capitalist classes. He argues that socially stronger groups would not allow others to be associated with state property and state revenues. He also suggests that the state's monopoly of production could be reduced mainly through drastic reduction of state expenditures and international economic competition amongst states (Bluntschli, 2000). We see the capitalist countries of the North advocating for this through the so-called Structural Adjustment Programmes (SAPs) in Africa.

The overt decisions taken by the ruling elites through policy, and the overall political economy that those in power choose in order to realise their mandate, has far reaching implications for low income housing as is reflected in this study. It is in the context of the interests of the ruling elites and the political economy that we should understand the actions of the apartheid state, the colonial state, the post apartheid state and the post colonial states in relation to the housing problems in Kenya and South Africa.

1.2.2. Comparative socio-economic realities in Kenya and South Africa

South Africa is ranked as a middle-income country – in economic terms. It has well-developed institutions and modern infrastructure. However due to high level of inequality and uneven development it is still grappling with problems similar to many underdeveloped African countries, e.g. high unemployment rates, a large informal sector, high levels of poverty and minimal black participation in the formal economy.

There are also problems relating to high levels of crime and HIV/AIDS. South African economic policy is generally neo-liberal. For South Africa, this means that assumed benefits from 'free' markets are considered as the key means to increase employment opportunities and household income, and to improve living conditions. It has a relatively high urban population, estimated at over 50% of the total population (see Tomlinson, 1999: 290; Huchzermeyer 2001c: 85). Figure 1.2 shows the administrative divisions of South Africa.

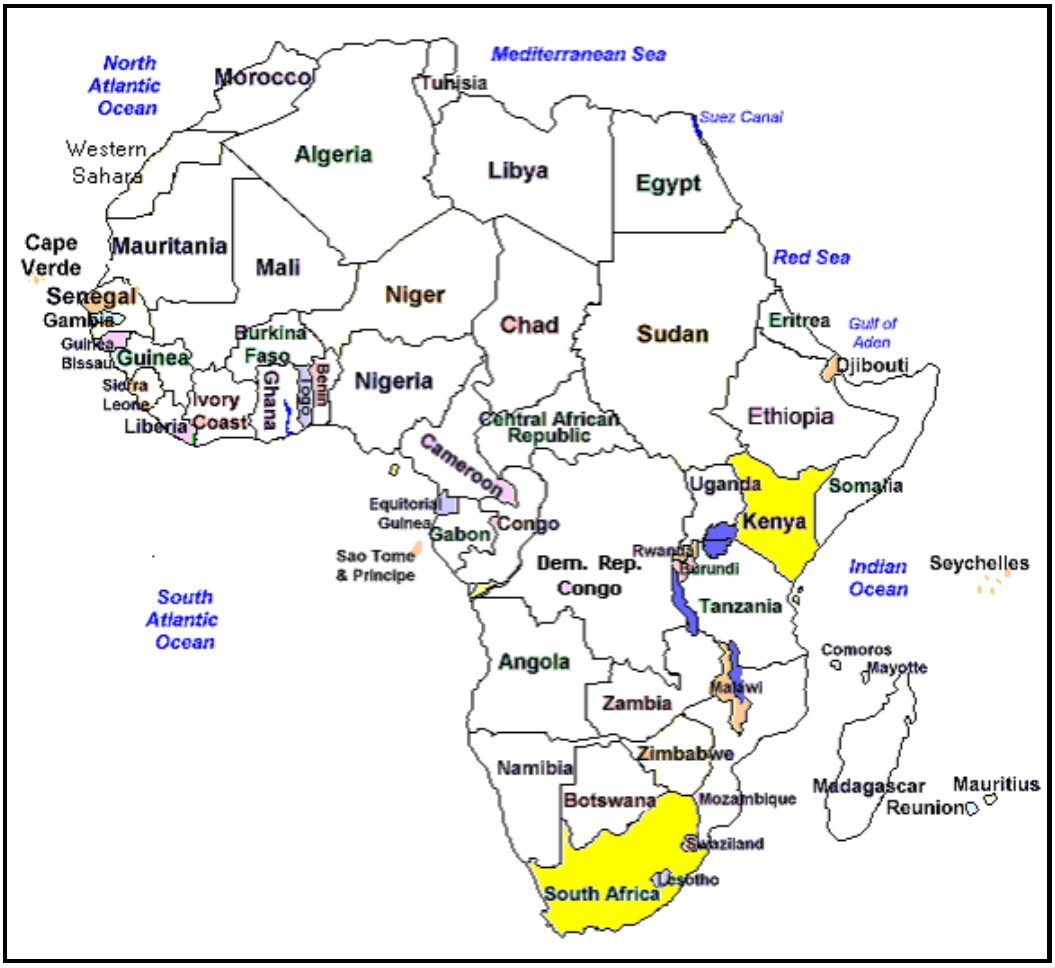


Figure 1.1. Location of Kenya and South Africa

Source: author, after the Africa Guide: http://www.africaguide.com/afmap.htm

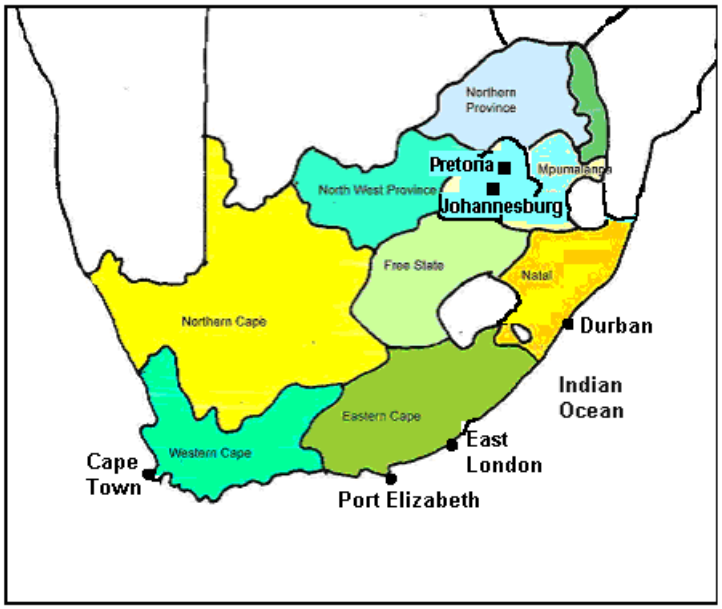


Figure 1.2. South Africa's administrative regions (Author)

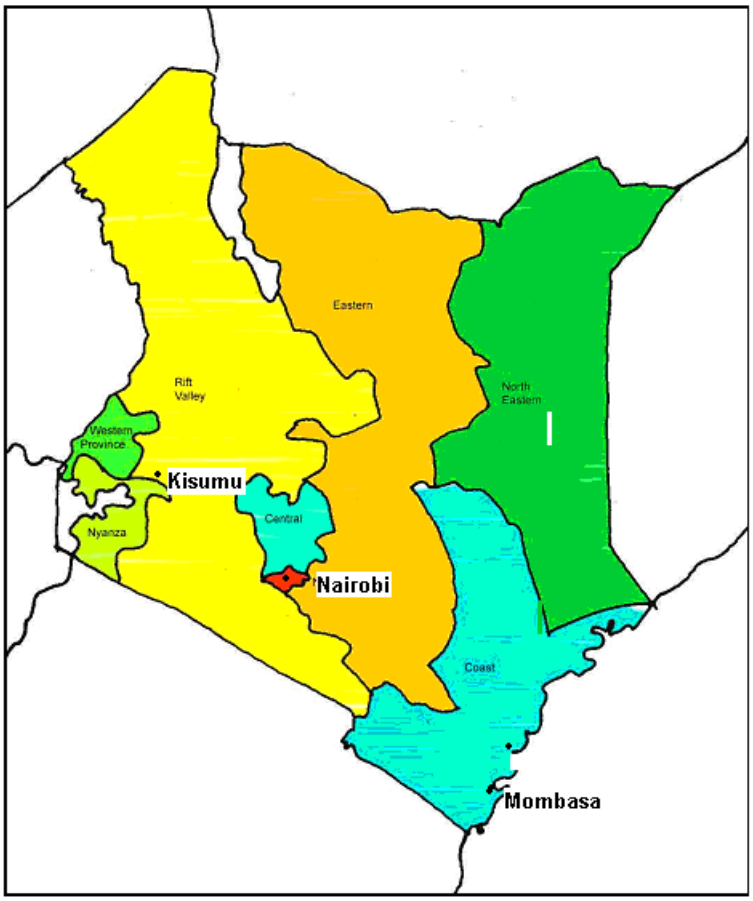


Figure 1.3. Kenya: administrative regions (Author)[

Kenya is the regional hub of Eastern Africa. The country's urban population is estimated at 29.9% (Obudho and Juma, 2002: 42), making it less urbanised than South Africa. Kenya relies mainly on production of primary goods. Economic growth has been inconsistent, with strong growth in 1995 and 1996, followed by stagnation (CIA, 2005). There is strong reliance on donor support, evidenced by socio-political and economic problems linked with the 1997 suspension of the Enhanced Structural Adjustment Programme loans by the IMF. The GDP contracted by 0.3% in 2000 to a current GDP of $34.68 billion (CIA, 2005). The economy has further been a victim to erratic rains, low investor confidence and political infighting. The country's administrative subdivisions are reflected in Figure 1.3.

South Africa is strikingly similar to Kenya in its human development challenges, but very different in economic terms, as reflected in Tables 1.1 and 1.2. There are significant differences in the countries' histories, land area, GDP, national budgets, the labour force and the strength of the currency. A rather interesting human development indicator, where the two countries have shown significant difference, is in birth rates and population growth rate. South Africa has much lower birth and population growth rates. The lower population growth rate in South Africa is attributable partly to higher death rates, due to the HIV/AIDS pandemic.

Table 1.2 shows aspects in which the two countries are similar, with the exception of the gross domestic product (GDP) – calculated per capita, the South African GDP is roughly ten times that of Kenya. Administrative divisions of the countries are relatively similar, though through South Africa's 'spheres of government' concept, relatively more power is devolved to the provinces than in Kenya's unitary state. Both countries have a large working age population. Life expectancy is remarkably similar, but South Africa registers a slightly higher death rate. Literacy records are also similar and unemployment in both countries is around 40%. In 1999, the GINI index (measuring inequality) for both countries was the same and the population living below the poverty line was approximately 50%. The broader development policies that have been embraced by both countries are neo-liberal, with South Africa having a slightly more elaborate welfare sector in comparison to Kenya.

Table 1.1. Comparative economic data on Kenya and South Africa.
After: http://www.cia.gov

	Kenya	South Africa
Background Government	Independence: 1963 *De facto* one-party state: 1969-82 *De Jure* one-party state: 1982-92 First multi party era: 1992-2002 New democratic government: December 2002	Union of South Africa: 1902-1948. Apartheid rule: 1948-1994. Black majority rule: From 1994
Area	582,650 sq km	1,219,912 sq km
Land use	Arable land: 7.03% Permanent crops: 0.91% Other: 92.06% (1998 est.)	Arable land: 12.13% Permanent crops: 0.77% Other: 87.1% (1998 est.)
GDP	$32 billion (2002 est.)	$432 billion (2002 est.)
Inflation	1.9% (2002 est.)	9.9% (2002 est.)
Budget	*Revenues:* $2.91 billion *expenditures:* $2.97 billion,	*Revenues:* $22.6 billion *expenditures:* $24.7 billion,
Labour Force	10 million (2001 est.)	17 million
Currency	Kenyan shillings per US dollar - 78.7491 (2002), 78.5632 (2001), 76.1755 (2000), 70.3262 (1999), 60.3667 (1998)	Rand per US dollar - 10.5407 (2002), 8.6092 (2001), 6.9398 (2000), 6.1095 (1999), 5.5283 (1998)
Birth Rate	28.81 births/1,000 population (2003 est.)	18.87 births/1,000 population (2003 est.)
Population Growth Rate	1.27% (2003 est.)	0.01% (2003 est.)
Population	33,829,590 (CIA, 2005 est.)	44,344,136 (CIA 2005 est.)

Table 1.2. Socio-economic data on Kenya and South Africa.
After: http://www.cia.gov

	KENYA	SOUTH AFRICA
ADMINISTRATION AREA	7 provinces and 1 administrative area (Nairobi)	9 provinces
AGE STRUCTURE	0-14 years: 41.3% 15-64 years: 55.8% 65 years and over: 2.9%	0-14 years: 30% 15-64 years: 65% 65 years and over: 5%
DEATH RATE	16.01 deaths/1,000 population (2003 est.)	18.42 deaths/1,000 population (2003 est.)
LIFE EXPECTANCY	45.22 years (2003 est.)	46.56 years (2003 est.)
LITERACY age 15 and over can read and write	85.1% (91.2%; RoK, 1999: 41)	86.4%
UNEMPLOYMENT	40% (2001 est.)	37% (2001 est.)
POVERTY Population below poverty line	50% (2000 est.)	50% (2000 est.)
GINI INDEX	0.445 (UNDP)	0.593 (UNDP)

1.2.3. The past context of the current housing challenges in Nairobi and Johannesburg

The settlement patterns which exist today in Nairobi and Johannesburg are a result of cumulative policy impacts of more than one century, with Nairobi developing closely in line with the patterns which were first established by the British colonial government and Johannesburg reflecting the legacy of apartheid. However, the patterns also reflect the policy choices that have been made by the respective national governments and local authorities, especially regarding housing.

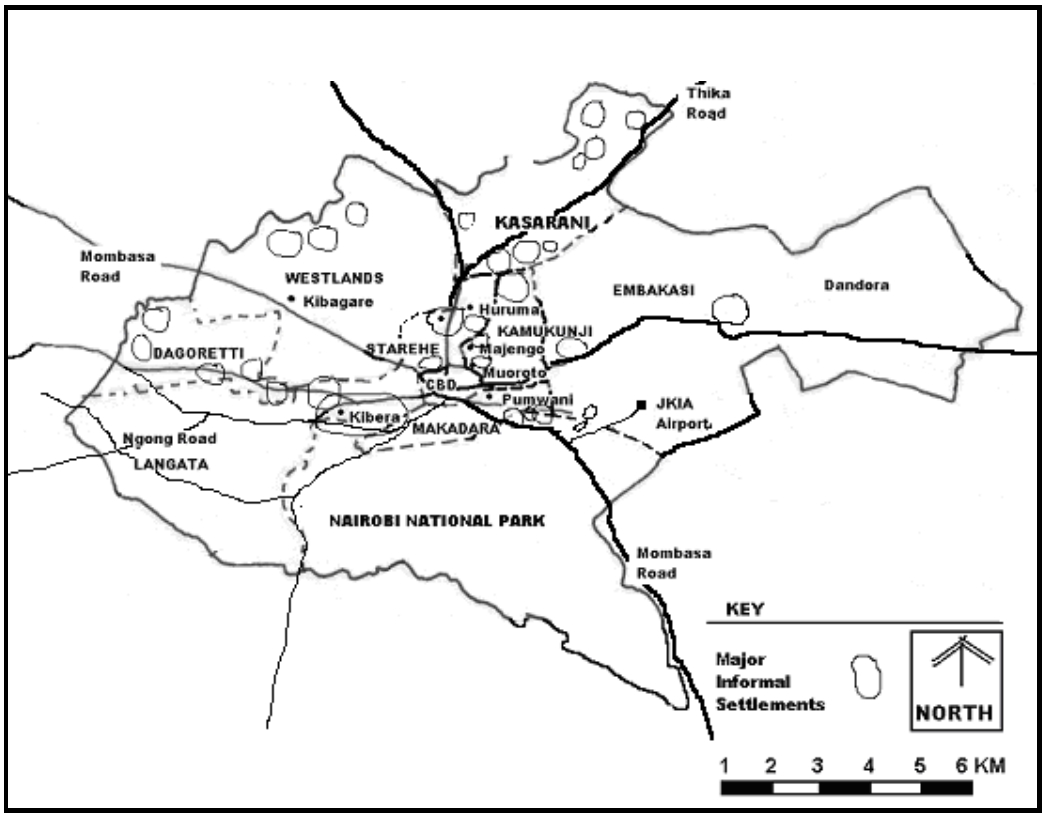


Figure 1.4. Diagramatic map of Nairobi city regions
Source: Author (informal settlements positions after Syagga, et al. 2001)

Nairobi started as an urban settlement, when the Kenya-Uganda Railway (KUR) authorities chose it as a stopping place in 1896 during the course of construction of the railway. It was well supplied with water by Nairobi and Mbagathi rivers (Obudho and Aduwo, 1992). It had good ground for residential development. In 1899, the Government of Kenya established its administrative headquarters there (Obudho and Aduwo, 1992). In 1900, the Nairobi Municipal Community (NMC) regulations were

published for development control (Obudho and Aduwo, 1992). Development followed zoned, racial, segregation. Europeans lived to the West, Indians to the North and Africans on the relatively dry Eastern peripheries. By 1909 much of Nairobi's internal structure, including the road network in the CBD, was already established. In 1919, the Nairobi City Council (NCC) was established (White & Anderson, 1948: cited in Obudho, 1997). In 1948, Nairobi's administrative boundaries were extended. It's population had increased from 8,000 in 1901 to 118,579 by 1948. By 1960 the African population of Nairobi constituted about 60%, while that of Asians was about 30% (see Obudho and Muganzi, 1991). The boundaries were extended further in 1963, when Kenya became independent. These have remained to date (see Figure 1.3).

In 1963, Nairobi had a population of 350,000 (Republic of Kenya, 1997:1). In the mid 1970s, there were concerns about the growth of the city's population as it put pressure on infrastructure, services and social amenities. It also led to a housing deficit, as public housing could not deal with the demand for housing. The result was growth of informal settlements (see Figure 1.4). The policy response was indirect, mainly aimed at refocusing development to smaller towns through the Growth Centres Strategy (Kenya National Development Programme 1974-78). This was to be accompanied by rural development through the Rural Trade and Production Centres (RTPCs) and later, the District Focus Strategy for Rural Development. There is no evidence that these policies reduced pressure on growth of Nairobi. According to the 1989 census Nairobi's population had risen to 1.35 million (Republic of Kenya, 1999:17; see also Obudho and Muganzi, 1991: 58 for calculations of these population growth figures and Gatabaki-Kamau, 2000: 8; Republic of Kenya, 1997). The figure was estimated to be 2 million in 1996 (Republic of Kenya, 1997). By 1999 the population of the city was growing at 5 per cent per annum, and a population of between 2.8 and 4.0 million people was expected by the year 2010 (Republic of Kenya, 1999; Olima & Shihembetsa, 2001: 293 estimated the growth rate at 7% per annum; see also Malombe, 1992: 196 for earlier growth figures). Syagga *et al.* (2001: 29) projected a population of 3.75 million by 2010 and 5.2 million by 2020.

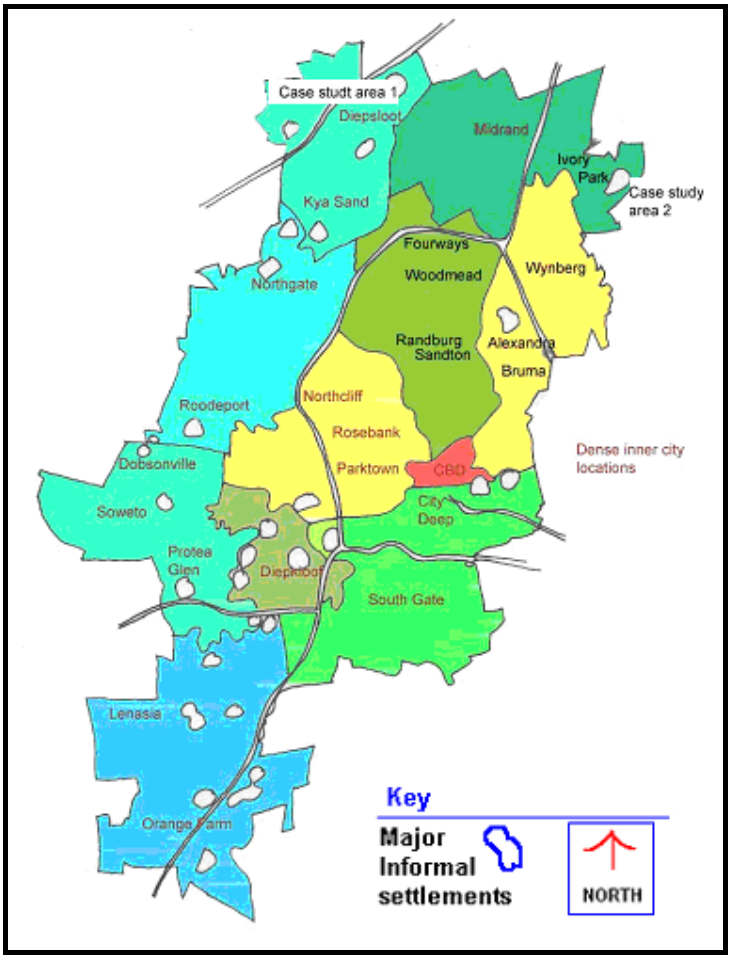


Figure 1.5. Johannesburg city regions
Source: Author (from various sources)

Development of Johannesburg as an urban area was given impetus by the discovery of gold in 1874. Permanent residential structures began to replace the original shantytown. Johannesburg grew rapidly, initially as a mining town, then later as the economic hub of Southern Africa (Johannesburg News Agency, 2002). Johannesburg was politically active, evidenced by the 1922 Miner's Revolt. In the 1960s there was an economic boom in South Africa, leading to faster growth of Johannesburg (Johannesburg News Agency, 2002). Apartheid legislation that controlled entry of African populations in the South African cities was equally applied to Johannesburg. The state provided single sex hostels for workers in Johannesburg. Black townships were established, e.g. Alexandra and Soweto. Other older mixed townships included Sophia Town and Kliptown. However, increase in demand for African labour in the

city resulted in relaxation of control legislations, in 1946/7, just before the National Party (NP) was elected with their apartheid policy.

The 1980s saw a volatile political situation in South Africa, with Johannesburg's black housing environment being characterised by rent boycotts, forced removals and abolition of influx control regulation. Overcrowding in African housing became evident after the collapse of the apartheid government. The economic growth rate for the city, between 1980 and 1991, was 1.3% compared with a population growth rate of 1.7%. Employment for most of the people coming to Johannesburg has been absent, as a result of decline in the mining and manufacturing sectors, with an increase in the commercial and service sectors that require high level skills (Beall , Crankshaw and Parnell, 2000: 108,109). Figure 1.4 shows the city's current administrative boundaries and distribution of informal settlements.

One direct consequence of growth of Nairobi and Johannesburg was the increase in occupational density of low-income residential neighbourhoods, with accompanying housing, health, sanitation and service problems. By 1965 it was noted that 81% of Africans in Nairobi were living in single rooms with occupancy rate of three or more persons per room (Gatabaki-Kamau, 2000: 4). By 1989, 80% of Nairobi's population of 1.3 million was accommodated on 20 per cent of the land. This population was concentrated in a number of high-density, inner-city wards, such as Pumwani and Maringo, with densities of over 26,000 people per km² (Mazingira Institute, 1993). According to Olima and Shihembetsa (2001: 294) 55% of the city's residents are currently concentrated on 5% of the land, therefore are not able to enjoy the overall low densities within the city of Nairobi, estimated at 50.7 persons per hectare. These population density patterns can also be seen in Johannesburg, with dense inner city locations and black townships. However, new low-income neighbourhoods in Johannesburg, have fairly low-population densities.

A second consequence of growth of these cities has been increase in informal settlements to meet housing demand (see Figures 1.4 & 1.5). At least 55-60% of Nairobi residents live in informal settlements (Republic of Kenya, 1997; Mitullah & Kibwana, 1998; Syagga, et al. 2001: 66; 67; Obudho and Aduwo, 1989; Obudho & Muganzi, 1991: 60; Bodowes & Kwinga, 2003: 221). There were 134 informal

settlements in Nairobi, with 77,589 structures, having a total population of 1,886,166 persons by 2000 (Syagga, Mitullah & Karirah, 2001:35). They occupy 5.5% (approximately 1025 hectares) of the city's land area (Matrix Development Consultants, 1993, in Bodowes and Kwinga, 2003: 221; Matrix Development Consultants, 1993, in Mitullah and Kibwana 1998: 200). Growth of informal settlements is linked with expansion of the informal sector, which employs 36% of Nairobi's population (Obudho & Juma, 2002: 43).

The city of Johannesburg has 190 informal settlements, with 117 000 households (City of Johannesburg, IDP 2003/4: 19, 52; see also Beall, Crankshaw and Parnell, 2000: 111, 112, 113). This excludes 108 000 households currently living in backyard shacks (City of Johannesburg, IDP 2003/4). The number of backyard shacks are expected to increase to 418 000 by 2005 (City of Johannesburg, IDP 2003/4: 52). The mechanisms to deal with informality in both cities are inadequate (see Syagga, 2002; Mitullah & Kibwana, 1998; Majale 2002; Huchzermeyer, 2002a,b; 2004). In both cities informality is associated with illegality, with Johannesburg going for an 'eradication' policy through upgrading, while Nairobi pursues a piecemeal approach, driven mainly by donor initiatives.

Lastly, inadequate supply of affordable housing by the state and the market has resulted in increase in self-help means of access to housing in both cities. While some of these are assisted by the state through various policies and programmes, many are not. In Nairobi these efforts are not limited to the lowest income groups, but are becoming increasingly important means of access to housing by the middle income who finds it very difficult to access housing through normal market mortgage options. In Johannesburg some of the initiatives are supported by policy. On the whole, self-help housing remains very relevant in both cities.

1.2.4. Some initial questions arising from housing challenges in Nairobi and Johannesburg

The housing challenges in both cities provoked some ideas on areas that might still need investigation in self-help housing. Firstly, there is the issue of resources and how they are exchanged in self-help housing. Studies in self-help housing refer

directly or indirectly to the different resources involved in housing production (see for example Turner, 1986). However, the ways through which these resources are exchanged, and the implications thereof, are inadequately explained.

Secondly, resources in themselves mean little, unless the actors through which they are conveyed and exchanged are well understood. This leads me to ask: how do the relationships amongst the different actors in self-help housing impact on resource access in this mode of production and what are the outcomes of these relationships? There is need to understand the relationships amongst the different actors involved in self-help housing and the impact of these ties on housing efforts. The issue here is that some particular relationships in self-help housing are likely to either inhibit or enhance production of housing through self-help. There are still many unanswered questions about actors in self-help housing. For example, in Nairobi, it is not always easy to tell who is involved and what roles they actually play in this genre of housing. There are invisible players, who impact on self-help housing in particular ways, but who may not be obvious to anyone, even government officials.

Thirdly, are the relationships amongst the actors and ways in which resources are exchanged significantly different across political economies? South Africa has developed in very unique ways, mainly due to the legacy of apartheid, as discussed earlier. Kenya, while sharing many characteristics with other ex-British colonies, has also evolved in many unique ways within the last four decades of independence. However, both countries pursue predominantly neo-liberal policies, though with very different housing policies. There should be important lessons that could be learnt from both contexts, which could then be used to improve practice and refine policy. The unique attributes of self-help housing in Kenya and South Africa also have the potential of contributing to theoretical debates in self-help housing.

One of the vehicles that can be used for studying actors and how they relate and resources and how they are exchanged in self-help housing is network analysis. These self-help housing networks are embedded in contexts where relationships are characterised by various aspects of social capital; enabled or limited by particular social structures; which in turn are impacted upon by the power variation amongst actors. In the next section, 1.3., I introduce various aspects of social capital in urban

contexts and the subtle relationship that exist between social capital and social networks. In the subsequent section, 1.4., I introduce the network concept and its application to analysis of resources.

1.3. Situating housing networks in relation to social capital literature

Social capital has been defined as 'the norms and networks that enable people to act collectively' (Woolcock and Narayan, 2000: 4). The mutual action is geared towards collective benefits (Woolcock, 1999). It is the ability of people to work together towards common purposes (Coleman, 1988: 95, in Harrison, 2004: 2). There are various perspectives of social capital. Woolcock and Narayan (2000: 23) have highlighted these as: the communitarian view; the networks view; the institutional view and the synergy view.

The communitarian view of social capital focuses on ties that are built by localised associations of the poor; be they members of a community or voluntary groups. It recognises that the poor have assets which could be used optimally through collective action (Woolcock and Narayan, 2000: 23).

The network view of social capital, which I will explain in further detail in the subsequent section, 1.3.1, considers that groups have intra group ties, which help members of the group 'bond', and extra group ties, which act as 'bridges' enabling group members to access resources from other groups (Briggs, 1998). This latter type of social capital is associated with entrepreneurial activities, and is characterised in many instances with what Woolcock and Narayan (2000: 23) have termed 'information brokers', who provide links between local groups and external sources of resources.

The institutional view of social capital considers the way social capital weaves in and out of the operations of the public and private sector (Woolcock and Narayan, 2000: 24). This view will explain the relevance of informal institutions. For example, in a failed state, networks of political relationships replace bureaucracy as the 'dominant institutions'. In a bureaucracy, social capital could be used in the state and private

sectors to enhance transparency, accountability and good governance. Putman (1993: 167, in Harrison, 2004: 7) argues that such features of social capital as trust, norms and networks can improve efficiency by enabling coordinated action amongst members.

The fourth view of social capital is that of 'synergy'. This is social capital used in the realms of co-production. This view emphasises extra local linkages, enabling scaling up of localised initiatives. Ostrom (1996) defines co-production as 'a process through which inputs from individuals who are not "in" the same organisation are transformed into goods and services'.

Other dimensions of social capital have been developed by various authors. Putnam (1993) for example has focused on the benefits of social capital to communities; while other authors e.g. Bourdieu (1983) and Coleman (1988), provide conceptualisation of social capital at individual level. The latter argue that social capital exists between individuals and by extension can be accumulated by individuals. Bourdieu (1983) and Coleman (1988) have identified five dimensions of social capital: first, lateral associations of various types occurring amongst individuals and groups; second, relationships of reciprocity, mainly amongst individuals and small personalised groups; third, trust based actions in social groups, believing that other members will reciprocate; fourth, social norms and values that although unwritten still direct behaviour; fifth, personal and collective efficacy in participative communities. More importantly, Bourdieu (1983) explains how different forms of capital are acquired, exchanged and converted into other forms of capital.

1.3.1. Social capital and social networks

There is a relationship between social capital and social networks that needs some explanation. Bourdieu (1986: 248) defines social capital as, 'the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalised relationships of mutual acquaintance and recognition'. His definition and critique of social capital is from a network perspective. The network view of social capital interests me in various dimensions. For example, in Kenya, a study by Narayan and Nyamweya (1996) showed that there was an

abundance of social capital amongst rural farmers; however this did not translate into economic benefits. The argument here was that while local 'bonds' amongst the farmers were strong, the 'bridges' which could have linked these local groups to external markets were weak. This leads me to the fact that a network view of social capital considers both vertical and horizontal associations of communities. While intra community ties help develop bonds of association and identity (Granovetter, 1973), inter-community ties across socio-economic class, gender, religion, ethnicity, race, are useful to ensure that intra-community ties are not used in a narrow, sectarian way to the detriment of everyone else (Astone *et al.* 1999; Harrison, 2004: 9-13). Thus the network view of social capital considers both the 'bonding' aspects of the same, making individual relationships within the communities stronger, and the 'bridging' aspects of social capital, opening up broader relationships amongst groups with wider, far reaching benefits (Gittell, Ross and Avis, 1998).

It has been recognised that within groups with high social capital there are burdens of obligations amongst members towards other members, which could be detrimental to individual members' economic progress (Woolcock and Narayan 2000). Portes and Landolt (1996: 20, cited in Woolcock and Rao, 2001) have observed that 'the same social relations that enhance the ease and efficiency of economic exchange among community members implicitly restrict outsiders'. An interesting paradox is that although members are likely to access more resources where there is stronger social capital, the more well-to-do members become, the less the groups become necessary for the former's survival and upward mobility. Granovetter (1995: 137) captures another paradox: while weak social capital in groups is of limited benefits to members, stronger networks lay more claims on members, extending these to many non-economic areas, which in turn might weaken members economically. To ensure that members overcome this apparent weakness, Granovetter (1995) suggests that the mechanism that members of small groups use is the 'coupling-decoupling mechanism'. 'Coupling-decoupling mechanism' means that members are able to draw on each other to a limited extent after which members would form other external ties that would enable them access more resources and bigger markets for their individual and collective goods and services. Similarly, Woolcock and Narayan (2000) observe that for development to take place in poorer communities, strong intra-community relationships must be complemented with strong inter community relationships,

otherwise a community may remain poor in spite of strong local ties. According to Evans (1996) high intra group networks accompanied with weak inter-group networks lead to increased inequality.

As far as entrepreneurship is concerned, Woolcock and Narayan (2000) have shown that amongst poorer entrepreneurs, the types of social capital that exist enable development of solidarity networks through which inter personal information is exchanged primarily for survival of the business ventures. In more complex entrepreneurial groups social capital is reflected in development of networks of innovation leading to increased profits, competitiveness, productivity and increase in the market share. Woolcock and Narayan (2000) name three important lessons about social capital, *viz:* it is used to increase development; the type of capital that exists is dependent on the broader socio-economic, cultural and political environment and that social capital could be used for positive benefits or retrogressive purposes (see also Beall, 1997, 2001 in Harrison, 2004: 13).

1.3.2. Social networks as support systems in urban contexts

Mitchell (1973) defined social networks as being made up of friends, neighbours, kinship, as opposed to organised groups. Social reality is conceptualised as as a network of social relationships occupying a wider social space (Bourdieu, 1983).The dominant position in the literature is that social networks are a means of support, enabling mutual dependency, hence reducing vulnerability of individuals in an urban context and also ensuring maximum impact through actions towards cooperative effect (Stocker, 1995). The Chicago School had embarked on early studies of social networks, the initial phase being 1910–1930 (Scott, 1994). Barnes, associated with the School, applied the concept of social capital, in 1954, to study 'centralised' networks. Research on social networks as support systems intensified in sociology between 1960 and the 1980s (Fischer, 1982). By the early 1960s it was becoming clear that there was need to re-consider social capital in the urban context, where the nature of vulnerability of individuals and the kinds of support needed was becoming more complex and a plethora of unique 'urban' factors impacted on social relationships in various ways, hitherto unforeseen. This was part of what Jane Jacobs (1961) engaged with in her book *the Death and Life of Great American Cities,* where she developed a

case for, and defined social capital in, urban contexts. There remains a problem in understanding social capital beyond relationships in communities to its implications at an urban scale (Harrison, 2004: 1). More recent developments of the concept have suggested a need for distinction between internal linkages within the physical boundary of a community and external linkages of individuals beyond these physical boundaries (Little, 2000; Narayan and Nyamweya,1996; Granovetter, 1973; Gittell, Ross and Avis, 1998; Evans, 1996; Woolcock and Narayan, 2000; Harrison, 2004). In the same vain Harrison (2004: 7) questions the relevance of area targeted policies, when it is clear in many large cities that many forms of social capital are not geographically contained.

It is useful to understand that social capital, accessed principally through social networks, does not replace other forms of capital, namely: financial, human, natural and physical (Moser, 1998). In cases of intense poverty, the types of support, through mutual help, that could be drawn from other community members who might also be experiencing similar problems, is limited. Social networks are also impacted upon in very specific ways in urban environments and such assumptions that social capital could always be drawn upon, e.g. to help in mutual construction, need to be reviewed (see also Fischer, 1982; Sodeur 1986, on social networks in urban environments). However, it is generally agreed that social relations affect the quality of urban life, just as much as the physical environment (Mackensen, 1986: 49). Harrison (2004) explains how social networks are useful amongst new urban dwellers for their induction into urban life.

Urban environments affect social networks in very specific ways. Sodeur (1986: 63-64) highlights some of these. Firstly, they are affected by demographic distribution of local populations. Differences in age, stage of family development and economic status limit these networks. In fact, according to Harrison (2004: 6) these could become criteria for formation of new groups. Secondly, social networks are affected by processes and functions in households, neighbourhoods and wider communities. The wide variance in functions, where one individual might be tending the gardens while another works in the commercial sector, limits the extent to which social ties may be developed around individuals. This is further exaggerated by class difference in many urban areas. Thirdly, social networks in urban areas are affected by the

specific time budgets of individuals in local communities. Relationships are likely to develop between individuals who spend most time together rather than on the basis of mere geographical proximity. Fourthly, social networks are determined by local opportunities. There is need for places and spaces where local people can bond; otherwise in absence of functional places, e.g. children's playgrounds, car washing facilities, cafes, etc. these location specific networks are likely to be weakened (Sodeur, 1986)

There is an emerging literature that is engaging with the question of social capital in the African City, particularly from the perspective of informal urbanism. This is reflected in recent work of Simone and Abouhani, (2005) *Urban Africa: changing contours of survival in the city* and the work of Kirsty Harrison (2004), which has focused on various aspects of social capital, particularly amongst inner city residents. With regard to the uniqueness of the African urban context in relation to social capital Harrison (2004) argues that there are very strong factors of ascription: e.g. groups based on rural places of origin, ethnicity, religion, etc. However, she argues that unlike their rural counterparts urban residents are more disparate, which limits potential for collective action. They are also more heterogeneous and sometimes belong to groups that are too big for the bonding social capital that would be necessary for collective action to be developed (Harrison, 2004: 6). Further, amongst poorer urban communities social capital may be inadequate and may need support through other agency, e.g. political structures or civil society organisations (CSOs), for effective local action (Harrison, 2004: 13). However, importantly, she observes that it is critical to realise that informal institutions are critical for survival of the urban poor and creation of relationships between energetic local civil society organisations and the state are useful for governance and service delivery (Harrison, 2004: 10).

Simone and Abouhani (2005: 3), in a study of associational life in African cities, observed that in Africa the networks of extended families and residential support systems find themselves overburdened. They also capture the complexity in access to social support because of the desperation of the actors involved in the urban areas:

> 'Tight-knit, cohesive communities are probably a thing of the past. Often groups within the community are more comfortable engaging with 'like

minded' or similarly configured identities at great distances rather than the 'difference' who live or operate 'next door' (Simone and Abouhani, 2005: 17). It is these sorts of challenges about the nature of relationships amongst residents in urban Africa which make exploration of network tools of analysis all the more relevant.

1.3.3. Social capital, structure and agency

Bourdieu (1986) argues that social capital mirrors social structure, representing the inherent structures of the social world. He argues that understanding the various forms of social capital will help elucidate social structures in which they are embedded. The concept cultural capital is seminal to Bourdieu's work. In defining cultural capital Bourdieu (1986: 248) argues that it manifests itself in three forms: embodied cultural capital; objectified cultural capital and institutionalised cultural capital. Briefly, embodied cultural capital is that capital which inhabits an individual, e.g. accorded by a position of social class through birth; objectified social capital are composed by symbols of social position reflected materially through such possessions as homes; art collection; land in specific localities, etc. and the social status that accrues there from. Instutionalised social capital is that which is imparted onto an individual through recognised social institutions, modern examples would be academic degrees, military positions, government and private sector based positions, etc. All of these forms of capital can be used as a rate of conversion between cultural capital and economic capital. All the three forms of cultural capital are strongly embedded into social structure (Bourdieu, 1986: 244 – 248).

Social networks are embedded into social structure. The understanding of social structure employed in the study follows after Giddens' theory of 'structuration'. Structuration explores 'the conditions governing the continuity of transmutation of structures and therefore reproduction of social systems' (Giddens, 1984: 25). 'Transmutation of structures' means that 'social action' is capable of producing social structures; these structures in turn determine 'social action' (*ibid*.). This duality between social structure and social action goes beyond the structural Marxist conceptualisation of social structures that tended to emphasise the inhibition of social

structures, and which subordinated social action to social structure (Giddens, 1984: 16).

Giddens (1984: 23) defines 'social structure' as 'rules and resources or sets of transformation relations, organised as properties of social systems'. He defines 'systems' as 'the reproduced relations between actors and collectives…organised as regular social practices'.

In network analysis, it is important to recognise that the levels of transformation that the various actors linked in a network can achieve vary. This is affected by the differentials in power and agency. Giddens (1984: 14) defines an 'agent' as 'an actor whose action has a transformative effect', because of the power inherent in the action. According to Giddens, an agent ceases to be as such when he/she 'losses power to make a difference' (*ibid*.). It is power that differentiates mere action (with no transformative potential) from agency (transformative action). Giddens (1984: 15) analyses power from a Foucaldian perspective, defining it not as an intent or will, but 'as property of societies and communities'. This approach emphasises that power is not limited to specific conduct, but is a property of all action (Giddens, 1984: 16). He argues that power 'enjoys continuity over space and time and assumes regularised relations of autonomy and dependence between actors and collectives in social systems' (Giddens, 1984: 16). It is power that determines and patterns most of the relations in networks. It is also power that determines the extent to which individual actors can make autonomous decisions to influence resources to their benefit.

1.4. Potential for application of network concepts to analyse self-help housing in Kenya and South Africa

After introducing various aspects of social capital and social networks in urban contexts, in this section I introduce other aspects of networks, beyond social network, which form an important background to network analysis of resources in self-help housing. Beyond use of networks as mechanism of social support, networks can be considered as a way of organising social life, as opposed to 'hierarchies' or decentralised organisations (Stockman, Zeigler & Scott, 1985). Network concepts

can be used as normative principles for organisational coordination, given opportunities offered through formalism and spaces of prescription. Networks can also be used as empirical tool for researchers (Friend, Powers and Yewlet, 1974, in Smith, 1999).

In this section I will highlight some key aspects of networks in sociology and economics; and housing and urban studies. I will develop a working definition of self-help housing networks. Then I will discuss the relationship between networks and hierarchies. Lastly I will look at the various 'network spaces'.

1.4.1. Network studies in Sociology and Economics

The root of network studies and development are from Sociology. Barnes (1954, in Meyer, 1977: 294) saw a network as a social field made up of relationships amongst individuals. These relationships were defined by an underlying criterion. Banck (1973:37) suggests that it was Barnes (1954) who gave a special meaning to the term 'social network', clarifying that the ties in social networks were unbounded. Nadel (1957: 16, in Banck, 1973: 37) was to expand on Barnes' work and recommended that a network should mean, 'the interlocking of relationships whereby the interactions implicit in one determines those occurring in others'.

Another early contributor to studies of networks was Clyde Mitchell (1969a). He explored the notion of generalisability in networks, i.e. the concept of total networks beyond the confines of any community (Mitchell, 1969a). He also explored recurrent, particular and general patterns in network analysis (Mitchell, 1969a). Other Sociologists who contributed to network analysis include: Leinhardt (1977), and Wellman and Barkowitz (1988). Leinhardt's (1977) *Social Networks* focused on quantitative social networks, while Wellman and Barkowitz (1988) developed a model for structural analysis of social networks.

Most early texts on networks tended to be about 'ego-centric' – individual based – and localised networks. However, Laumann and Pappi (1976) deviated from this, focusing instead on group-based networks. Their work was published as *Networks of Collective Action* (Laumann and Pappi, 1976). Scott (1994) also explored 'Socio-

centric networks' – group based ties. In his book, *Social Network Analysis,* Scott (1994) outlines theoretical and methodological issues of network analysis. The book further traces the development of network analysis, though most of it is devoted to expounding on the key elements of Graph Theory.

In Economics, Castells (2000) applies the network concept to the 'information age' and uses various theories to unpack the relationships of firms and business. The linkages explored range from local to global. Castells (2000) expands on network concepts without limiting himself to the details of Sociometric Analysis associated with Mathematical Sociology, but uses general interpretation of Graph Theory to concepts situated outside Sociology. His work gives clues as to how concepts like 'vertical and horizontal networks' could be employed to explain modern economic management and flow of profits in real estate. It also gives clues as to how network analysis could be applied in comparative political economies.

Still in Economics, Curran's (1994) work published as *Small Firms and Local Economic Networks: the death of the local economy?* gives indications of how network studies could demonstrate exploitation in economic exchanges, which would be difficult to expose otherwise. The work further uses the concept of *social entrepreneurs*, arguing that activities of small firms are suspended between economic relationships of the market and social relations outside the market.

1.4.2. Network studies in housing and urban research

This study is developed on the basis of contributions made by earlier researchers working in the field of housing and urban studies. Early network related work in Urban Studies was by Jane Jacobs (1961) who developed a case, as mentioned above, for applied social capital and survival networks of the poor in urban contexts. Other contributions include the work of Christopher Alexander (1988). This work focused on a paradigm shift from analysis of physical characteristics of urban areas to analysis of quality of interactions. Alexander's (1988) work is important as it was amongst the early works to consider cities as *systems*. He applied, *elements, sets, systems* and other concepts that are still useful in understanding abstract relationships that occur in urban realms.

In the 1970s Turner, a major English protagonist of self-help housing whose work influenced the policy directions of major international development agencies, including the World Bank and the UN, had distinguished *networks* from *hierarchies*, in the context of self-help housing (Turner,1976).. Turner's (1976) contributions were broad, but included very clear definition of self-housing as a *system* composed of specific actors, activities and outcomes. Turner (1976) suggested that since self-help housing was a *'process'*, the *network concept* was appropriate for its analysis (Turner, 1976). Turner's central argument was that housing problems in the context of self-help were partly because of lack of access to hierarchic systems of delivery associated with centralised government programmes (Turner, 1976).

Other contributors were Fiori and Ramirez (1992) who considered *networks* and *spaces for negotiation* as two concepts that could help understand low-income housing (I explain these concepts in Section 1.4.5). Smith (1999; 2003) then expanded on Fiori and Ramirez's work through an analysis of low-income housing in Costa Rica. In fact it was on the basis of Smith's (1999) suggestion[1] of further potential for development and application of network concepts in self-help housing that this study was born.

1.4.3. The Actor-Network Theory in organisational analysis

The Actor-Network Theory [ANT] is seminal to the works of Michel Callon (1991) and Bruno Latour (1991) and British Sociologist, John Law (1992), at the *Ecole des Mines* in Paris, France. The theory explains that atomistic focus on single actors, particular in pursuit of scientific outcomes, ignores sophisticated networks of human actors, e.g. professional colleagues, support staff, the scientific community, etc. and the non-human actors, e.g. machines, computers, etc. that form a network critical to any production (Monteiro, undated). It is these human and non-human actors ('*actants*') and their networks that can fully explain outcomes of any scientific or

[1] I communicated with Smith via e-mail on his study in July and August 2003. I later held discussions in October 2003, in Edinburgh, with Dr. Paul Jenkins, the Director of Centre for Environment and Human Settlements, Herriot-Watt University, who was Harry Smith's PhD supervisor. This helped clarify some initial concepts applied in this research.

social endeavour (*ibid*.). 'Actor-network' is literally the heterogeneous materials that make up the context of a network (Law 1992: 382, in Monteiro, undated).

There are five key elements of the Actor-Network theory as developed by (Latour, 1991). First, this theory recognises that processes of production are driven by networks and links rather than by heroic individual achievements (*ibid*.).

Second, the actors linked in these networks, i.e. the nodes of the networks are not only composed of human actors, but also of non-human actors, e.g. physical objects, without which the integrity of the network would be compromised (Latour, 1987; Callon, 1988). For example, if we took the process of banking, there would be need not only for human actors, namely: bank customers and tellers, but also non-human actors, namely: cash machines, computers, etc. These human and non-human actors are called '*actants*'. They are both important in maintaining the integrity of the network and according to Latour (1987) and Callon (1988) all these human and non-human actors have agency.

Some criticisms of the ANT have been on this issue of '*actants*' as it tends to put the human and non-human actors on the same plane The opponents argue that human actors act very differently from non-human actors (Monteiro, undated). The former is driven by diverse often intentions that are difficult to map, while the latter perform more or less predictably. In defence of the ANT's approach, Law (1992: 383, in Monteiro, undated) argues that although it seems a radical move to grant artefacts the same explanatory status as human actors, this does not reduce human actors to mere objects, he argues that this 'is an analytical stance, not an ethical position'.

Thirdly, the various '*actants*' have different value systems, which have a potential of creating conflicts, with the result that the network may fail to function as an integrated system (Latour, 1991; Law 1992: 366, in Monteiro, undated). There is need for reconciliation of these values, or more precisely, what the network theorists call 'realignment'. The process through which the values are realigned is called 'translation' (Monteiro, undated). Translation results in socio-technical compromise that enables the '*actants*' to work as an entity and stabilise the system (Law 1992: 366, in Monteiro, undated). The process of translation is itself composed of at least

four processes: namely: ‘problematisation’; ‘interessment’; ‘enrolment’ and ‘mobilisation of allies’. ‘Problematisation’ is the process through which a problem is identified, defined and agreed by the various actors. ‘Interessment’ is the process through which the various actors negotiate and agree on their various roles. The primary actors try to convince the supportive actors that the roles assigned to them are appropriate. In ‘enrolment’ actors accept the roles that have been agreed through the negotiation processes. In the last process of ‘mobilisation’ there is an attempt by the various actors to represent the microcosm in which they found themselves in; this is fundamentally a process of legitimacy (Monteiro, undated).

Fourth, the structure of a project becomes evident when these translations have been successful. ANT theorists argue that where translation has been unsuccessful the structures of the project and the overall value of the actors would not be apparent (Monteiro, undated).

Fifth, they argue that human actors in a project are can actually be theoreticians. This is because they are always involved in acts of interpretation their realities. This should be considered by the sociologists who have monopolised interpretation of the action of other without taking the latter’s views into consideration (Monteiro, undated).

The theory has been widely applied, e.g. in organisational analysis, informatics, health studies, geography, sociology, anthropology, and economics. Its major contribution is in explanation of why projects fail or succeed; i.e. through analysis of the integrity of the network (Monteiro, undated). ANT is not normative and has been criticised for being too descriptive, amoral and uncritical (Latour, 1996). It is heterogenous, avoiding top down and centralised approaches to organisational management (Latour, 1996: 86). According to Law (1999: 4, in Monteiro, undated), it is an operationalisation of the essence of social constructionism: it is waging war against essentialism and is devoted to ‘understand how it is that durability is achieved’. However, it has been credited for being able to deal with complexity in social organisations, from a non-normative perspective (Monteiro, undated).

1.4.4. Towards a working definition of housing networks

It is necessary to define specific meaning of networks applied in a study for purposes of clarity and focus. According to Nohria and Eccles (1992, in Yeung, 2000: 302) 'network' has become a 'terminological jungle in which any newcomer may plant a tree'. Yeung (*ibid.*) then proceeds to define networks as 'governance structures and processes of socialisation in which disparate actors and organisations are connected in a coherent manner for mutual benefits and synergies' Yeung's (2000: 302) definition of networks, assumes only social networks, which is understandable, given that he is looking at networks from the perspective of Sociology.

In common usage, the term 'network' can be considered either as a noun or as a verb. The former implies a complex system, or a set-up, with sets of connections, arrangements, intercommunication, associations and contacts (Shorter Oxford English Dictionary, 2002: 1910). The latter implies meeting, making of contacts, exchanges and interactions among persons. The purpose of such a 'system' or 'interaction' is for 'exchange of information, contacts, and experience for professional or social purposes' (Oxford English Reference Dictionary, 1996) to foster relationships and to allow efficient use of resources (Shorter Oxford English Dictionary, 2002: 1910). Smith (1999: 48), in expanding this definition, emphasises 'network' as a verb, suggesting that the purpose for housing networks is for 'delivery of housing'. He defines 'housing network' as a group of people (actors) who exchange resources for production of housing. Although Smith (1999) does not state this, defining 'housing network' as 'a group of people', actually acknowledges the noun view of housing networks.

My approach in this thesis emphasises networks as a 'system' of housing production; a 'noun view'. The study also deals with the processes of exchange and agency in self-help housing, a 'verb view' of networks. These two views are explained further in the subsequent paragraphs.

The 'noun view' to network studies gives prominence to the actors studied. I would like to quote Barnes (1954: 43), who envisaged a network thus:

> '…I find it convenient to talk of a social field of this kind as a network. The image I have is that of a set of points, some of which are joined by lines. The points of the image are people, or sometimes groups, and the lines indicate which people interact with each other…'

This definition by Barnes envisages both a field of people and groups ('noun view' of networks) and interactions amongst them ('verb view' of networks). It envisages both a system ('noun view') and a process of exchange ('verb view').

In my study I have categorised my analyses in three: emphasising both the 'noun' and 'verb view' of housing networks (see Chapters 4, 5, 6). First, I look at the atomistic ties of the ego, in ego-centric networks ('noun view'). Second, I look at networks of groups for collaborative action, emphasising the systems of exchange rather than the processes ('noun view'). Thirdly, I look at networks of exchange at political economy level, emphasising processes of exchange rather than the actors linked ('verb view'). These various views enable a broader view of housing networks at political economy level, rather than focusing on one view only.

For the purpose of this study, 'housing network' should be understood as a complex system or web of relationships, among actors and agents, through which various resources such as land, finance, information, labour, infrastructure, services, technology, etc. are exchanged for the primary purpose of production of housing.

1.4.5. Networks versus hierarchies

In his essay *Housing as a Verb*, Turner (1976) differentiates 'networks' and 'hierarchies', albeit without giving a terse definition of these terms. He considers 'hierarchies' as synonymous with centralised state housing delivery, which tends to be hierarchical and bureaucratic. He suggests that the alternative to the 'hierarchical approach' would be a 'networked system'. He sees access to resources better enabled through a 'networked system' than a hierarchical one. Turner (1976) argues that 'networks' are enablers of choice. He further defines 'actors' in self-help housing 'networks' linking his argument with the concept that housing is a 'process', a 'verb view', as opposed to a product, a 'noun view'. Turner suggests that 'networks' are appropriate for self-help housing analysis, but he does not develop a tool/means of analysis.

In his essay, *A City is not a Tree,* Alexander (1988) engages with ways of categorising complex urban relationships, shifting his focus from physical analysis to principles and abstractions. Alexander (1988) argues that different actors in the urban landscape could be categorised based on limitless numbers of categories, e.g. gender, level of education, employment, etc. That several actors may appear in several categories is not surprising, e.g. a man, with college education, who is also a parent. Each of these entities, e.g. actors, is what Alexander calls 'elements', i.e. the basic units. The elements belong to 'sets' - a set being 'a collection of elements seen as belonging together' (Alexander, 1988). The broader argument that Alexander develops is that the different elements are linked in complex patterns rather than a simple 'hierarchy' or 'tree'. These complex patterns of linkages, with overlap of boundaries, are characteristic of networks.

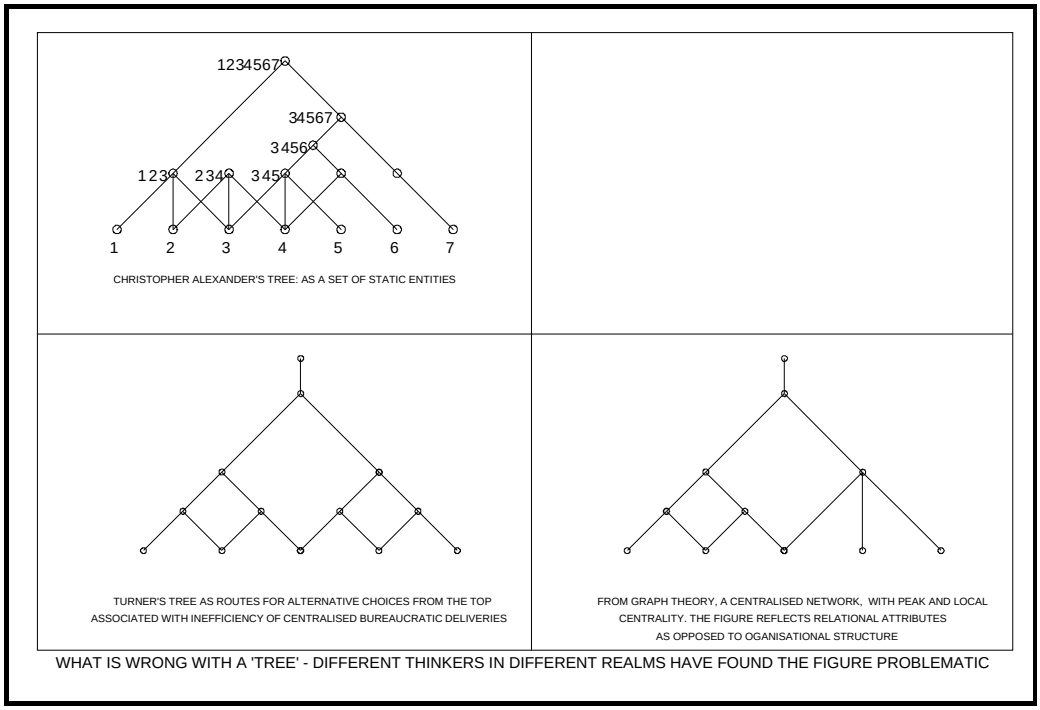


Figure 1.6. Hierarchical patterns from Turner, 1976; Alexander, 1986 and Scott, 1994

It is interesting that developments in network studies in sociology (see for example Scott, 1994) clearly show that 'centralised systems', which are quite similar to Turner's 'hierarchies' and Alexander's 'tree', do not reflect the natural relationships of individuals, especially outside the regulated market or state spheres. 'Hierarchies'

are partly problematic as means of self-help housing production as they tend to be incongruent with existing relational patterns that are embedded in local socio-economic contexts. The space self-help housing occupies, including state assisted self-help, is characterised by networks of ties. The webs of relationships reflected in networks could be optimised to deliver 'elements', 'components' and 'assemblies' – to borrow Turner's (1976) terminology – to low-income groups, through self-help. In my view there is need, for the sake of conceptual clarity, to differentiate 'networked systems' from either 'decentralised ones' or 'hierarchies', in spite of the fact that networked systems tend to be associated with decentralised models.

Most networks, even in self-help housing, are 'found', i.e. they are not planned, *a priori,* by specific persons or authorities. It is unlikely that they would respond adequately to state policies and programmes planned without them in mind. There is need to recognise that networked models need not replace centralised and decentralised ones. What are critical are the interactions of these approaches. Though a network approach to development would focus on distributed and spread out competencies, there would still be need to have some centralised competencies (Granstrand, Patel & Pavitt, 1997).

Bureaucratic linkages manifest in government and markets have been considered the best representation of 'hierarchies' (Thompson, 1991; Turner, 1976). Other authors have considered 'hierarchies' as another form of networks (see for example Smith, 2003, on 'vertical' and 'horizontal networks'). In this research networks are considered as separate and different from hierarchies, in spite of the fact that they have continuous interactions. In a strong regulatory environment, e.g. apartheid South Africa, one would not only see clearly legislated relationships amongst different actors in self-help housing, but also dominance of hierarchies. In a political economy, like Kenya, where the regulatory regime is very weak, a lot more unordered webs - hence networks - are found. After completion of analysis of my field data, I came to the conclusion that the analytical differentiation between 'networks' and 'hierarchies' is still useful because of fundamental differences between the two. However, in terms of the outcome of the linkages, it seemed that other attributes e.g. levels of connectivity, volumes of flows and the duration in which the linkages had been in place, etc. had much greater impact on housing production, rather than the simple fact

that the linkages were ‘networks’ or ‘hierarchies.’ Further, the concept of hierarchies was very useful in analysing access to infrastructure and services for self-help housing, in Nairobi and Johannesburg.

1.4.6. Spaces of prescription and spaces for negotiation

Housing networks are spaces for negotiation, bargaining and coercion. Murdoch (1998: 358) while explicating the spaces of the Actor-Network Theory differentiates the spaces that individuals could manipulate to access resources for their own use, as ‘spaces for negotiation’, distinct from such spaces that are made up of prescriptive rules and regulations, necessary for functioning of groups. The latter he calls ‘spaces for prescription’ (*ibid.*).

I consider networks as opportunities for expression, communication and transfer of information among individuals in self-help housing. They have the potential of being used as arenas for empowerment. They can also be considered, as by Mitchell (1969b: 10), from an instrumentalist point of view, i.e. as purveyors of material goods and services. This has been conceptualised by Latour (1994: 792, in Murdoch, 1998: 360) as objects of the networks, as opposed to subjects (people)

Spatial discussions in network analysis are linked with the ‘new meta-geography’ that networks enable. Murdoch (1998: 357), while expounding on spatial and temporal implications of the Actor-Network Theory (ANT), suggests that the network perspective can’t coexist with the notion that spaces are fixed and absolute. He revisits Harvey’s (1969: 208, in Murdoch, 1998: 358) position that activities and objects define spatial fields of influence. Harvey (1969: 191, in Murdoch, 1998: 358) defines space as ‘systems of relations’. The Actor-Network Theory identifies two other spaces, *viz*: spaces of prescription and spaces for negotiation (Murdoch, 1998: 358).

Spaces of prescription are dominated by formalism, which is a ‘prescriptive script’ that lays down specific behaviour of individuals who comprise a network (Murdoch, 1998: 363). Formalism helps define frameworks of action, together with the entities and spaces (*ibid.*). However, Murdoch (1998: 363) observes that formal networks do

not rise out of prescriptions, but formalism is a trade-off of specific local uniqueness and generalities that are needed to make a network work.

The concept of 'spaces for negotiation' imply that actors can carve for themselves a degree of autonomy from the network prescriptions, imposed through formalism, particularly in networks of collective action, dominated by organisations and institutions (see Murdoch, 1998: 363). The scope of negotiation will vary according to the level of prescription that occurs in a network. This implies that non-formal, ego-centric networks are likely to have more spaces for negotiation than either networks of collaborative action or hierarchies. However, there are structural limits to negotiation that need to be recognised, especially when individuals are mere actors, with low levels of agency. Even from a network perspective, a distinction has been made between those actors whose action results in establishment of links from the others who merely transmit resources.

The concept of 'spaces for negotiation' has been used before in self-help housing. Fiori and Ramirez (1992) used it in their definition of a conceptual framework for analysis of self-help housing in developing countries. Smith (1999) later used the concept in analysis of self-help housing in Costa Rica. He considered 'spaces for negotiation' as analytically different from 'networks'. From my review of relevant literature and through testing of the concept of spaces for negotiation in the field in Nairobi and Johannesburg, it is clear that networks are in themselves, spaces for negotiation. The argument here is that if networks are composed of relationships and linkages amongst actors through whom resources flow, then such issues as exploitation, empowerment, redistribution and negotiation, which are centered on resources, must necessarily happen within networks. It is these spaces for negotiation, which are responsible for asymmetry of resource exchanges in networks, resulting in collaboration as well as conflicts between actors (see Ritzer, 1996: 423).

1.4.7. Other network terminologies

In addition to the various terms that I have so far explored in this chapter that help understand network analysis, e.g. terminology relating to the neo-liberal state, various other terms helping to understand social capital, various network concepts, concepts

relating to social structure and agency, hierarchies, terms relating to network spaces, etc., there is a specific terminology used in network analysis and applied in this study, which, though explained in more detail in Chapter Four, needs an earlier elucidation. These terms which are central Graph Theory include (but are not limited to): 'density'; 'value'; 'bridges', 'social entrepreneurs'; 'thickness' and 'structural positions'..

'Density' is the general level of linkages amongst points in a graph. It reflects the overall intensity of ties in a network (Scott, 1994: 72). 'Value' shows the importance, hence reliability, of a tie. It is a reflection of the strength of a tie, which has in turn been defined as a combination of 'the amount of time, the emotional intensity, the intimacy and the reciprocal services, which characterise a tie' (Granovetter, 1977: 348; Briggs, 1998: 12, 13). In this study I represent values with numbers 1 – 10 as explained in more detail in Chapter Four, Section 4.6. 'Bridges' are those actors who play an important role between various actors. They link one network to another. Networks with many bridges show high levels of 'between-ness'. In terms of the entities that are 'bridges' the most common are 'social entrepreneurs' or *animateurs.* They may be individuals or groups. These community entrepreneurs have the development of the whole community as their goal (Johannisson and Nilsson, 1989 in Malecki, 2002: 932). The 'thickness' of a link shows how many different resources are exchanged through a particular tie. It also refers to how various local institutions collaborate towards collective goals (see Amin and Thrift, 1994 on institutional thickness). Network analysis is structural. It takes the position that actors are constrained by the structural attributes of the networks they find themselves in (Ritzer, 1996: 424), even as they impact on these structures**,** recreating them. Structurally-equivalent actors are therefore those actors whose agency can be considered to be similar, i.e. the impacts of their actions on their networks are not likely to be that variable in structural terms.

1.5. The main objective of the study: resources and networks

The previous sections of the chapter have dwelled on two main themes: The political economy of self-help housing in Kenya and South Africa; and an introduction of

pertinent themes in network analysis relevant to self-help housing. This is meant to act as a build up to the key objective of this research, which was to study resources and networks in self-help housing in Nairobi and Johannesburg. This has been divided into two sub-objectives: to study resources and how they are accessed in self-help housing in Nairobi and Johannesburg; and to study networks, how they are used by various actors to access housing resources and the extent to which they are/can be used in self-help housing production in Nairobi and Johannesburg.

The main question in this research was: How can network analysis be used to better understand access to resources and relationships amongst actors in self-help housing, in Nairobi and Johannesburg? The major interest here was to find out how different resources are accessed in self-help housing and how various actors in self-help housing actually related both in environments where there is dominance of informal networks (Nairobi, Kenya) and also in environments dominated by hierarchies (Johannesburg, South Africa).

Having found out how self-help housing networks work and how different actors relate in housing networks, in these different political economies, the research explored a subsidiary question: to what extent can networks (as opposed to state/market hierarchies and decentralised models) be used in self-help housing production in Nairobi and Johannesburg?

1.6. Research Design and Methods

In this section I discuss key methodological approaches used in this research. These include: overview of the research method; case study approach and the choice of cases within cases; the comparative method; relativist and qualitative approaches to network studies; provision, production and levels of analysis; units of analysis and variables; data collection methods; and research strategy. While exploring the above I will also explain why specific approaches were taken and the benefits that accrued from pursuing those approaches.

1.6.1. Overview of the research method

Research methods have been defined 'as tools of data generation and analysis' (Sarantakos, 1998: 6). They are embedded in specific methodologies. A methodology is considered as the specific model of a study, including the framework employed in the study; it is also related to the theoretical principles employed, relating it to the research paradigm (*ibid:* 33). A research paradigm is made of the values, beliefs and techniques shared by a scientific community indicating the kinds of problems that members should address and the types of explanations acceptable to them (*ibid.:* 32).

The research uses pairs within pair, case study approach. Understanding the nature and operations of local networks within a political economy called for the use of the comparative case study methods. I noted that this has already been done relatively well by Smith's study in 1999, which looked at several cases in Costa Rica. In terms of extension of the knowledge base of network analysis, comparison across political economies would give further insight into network analysis in housing. Thus the approach adopted here enabled intra-country, intra-city comparison, which generated qualitative information which was then subjected to inter-country comparison, acknowledging in both instances local and political economy differences in the cases.

The overall approach had some limitations that need to be outlined before the methods are detailed in subsequent sections. The methodology did not allow me to assess the extent to which networks were cost saving. This would have needed a comparison between networks and other approaches of access to resources, which the design of this research did not allow. Again, although I observed many networks in action, this study focused more on the flow of the various resources through these networks, rather than this phenomenological aspect. However, the design of the study, as reflected particularly in the data collection sheets, enabled me to assess outcomes of the networks studied through collection and analysis of various hard and soft data. The other issue was on the number of individual interviewees. Although the study deals with both micro and macro level issues, it has not been conceived as a survey. It is fundamentally a qualitative study, but with a relatively high number of individual interviews; more than 100 in all. In addition, the study also develops data on a number of groups. In terms of small samples, a lot of work has been done

methodologically in this area by Charles Ragin (1987) in his Small-N research. Generally Ragin (2000) lays emphasis on the intensity of interaction of the various variables within small groups, rather than extensiveness of the groups *per se* in his Qualitative Comparative Analysis. For example in applying this approach, Takenoshita (2004) analyses 28 households only in a political economy level study comparing the impact of the type of education (Japanese and Chinese) on economic standards of Chinese immigrants and the Japanese. Although classical network studies, in Sociology, emphasised on the networks of the ego; this study, like many studies on self-help housing, emphasises activities of groups (collective action) alongside efforts of the ego in accessing various resources for housing.

1.6.2. Relativist and qualitative approaches to network studies

Networks, including self-help housing networks are 'real' and 'constructed'. It is instructive that first definitions of networks, for example used by Radcliff-Brown, emphasised that social structure was composed of networks of actually existing (not imagined) ties (Meyer, 1977: 294). The existence of ties amongst different individuals and organisations can be independent of the researcher. To this extent existence of networks can be said to be objective. However, the linkages that get chosen by the researcher for investigation and the interpretation of the importance of those linkages depend on the researcher's theoretical approaches and personal assumptions. Mitchell (1973: 33) suggests that the researcher is always abstracting to discern regularities in relationships. He suggests that what is presented as networks are analytical constructs, which the researcher erects partly by taking into account the participants and fitting together observations/abstractions that may not be available to the participants (Mitchell, 1973: 33). To that extent network are 'constructed' and network studies are 'relative'. Thus in terms of research paradigms network studies are situated between positivism and relativism; requiring a methodology that incorporates both.

Briefly, the relativist paradigm includes such approaches as qualitative and naturalistic research, and constructivism (Mark, 1996). The following are some of the characteristics of relativism: the researcher moves freely between data collection and theoretical analysis; the methods are from specific to general; the results are complex and rich; the researchers are interested in the outcomes; and research is flexible and

intuitive. Relativists do not assume that there is an objective and independent reality. Any method of data collection may be used including subjective sources, and the goal is to enhance our general understanding of complex events and processes such as the complex networks in informal housing (see Smith, 1999: 67-68; Mark, 1996: 213 – 214).

Positivism, on the other hand, assumes existence of an objective reality, independent of our perception, which can be arrived at via 'scientific investigations' (see Mark, 1996: 208 –209; Smith, 1999: 66), regardless of either the orientation of the researcher or the nature of interaction between the researcher and data. A critique against positivism is that it does not provide an accurate view of reality. It provides knowledge with limited applicability. Time and context-free generalisations do not exist. Positivist research is not value free. Human interactions have consequences on social phenomena and observation or measurement of phenomena changes it (see Guba, 1989: 99-103; Mark, 1996: 209 – 210, in Smith, 1999: 67).

This study uses predominantly qualitative research methods. Relational attributes and political economy analysis of self-help housing networks, which are central in this research, cannot be tackled adequately on the basis of objective observations, measurements and use of statistics – the defining features of quantitative research (see also Mark, 1996: 210 and Smith, 1999: 69). According to Mark (1996: 211) qualitative research uses general descriptions, narrative, relationships and events to explain phenomena. The findings may be presented in categories or general statements about the complex nature of phenomena. The key problem with qualitative research, according to Smith (1999: 70) is the difficulty to verify the results through measurements. Despite my leaning to qualitative research methods, I agree with Patton (1987:18, in Smith, 1999: 70) that the dichotomy between the qualitative and quantitative research methods may be false, as it confines data to an end in themselves rather than a means of understanding research questions. Methods of evaluation should be matched with the research questions. To further the argument, Oakley (1990:31) suggests that while the development process – which is where this research is situated – is qualitative, the projects are quantitative, hence the need to combine both approaches.

1.6.3. The comparative case study, within case study approach

According to Yin (1994: 13) a case study investigates a phenomenon in real life context. This method is even more necessary when the boundary of the phenomenon and its context is blurred. When one engages with networks, informality and other messy aspects of urban phenomenon, then the case study approach tends to be appropriate. The research uses multiple case studies, within case studies to explore various different dimensions of widespread phenomena. From a quantitative point of view one could argue that one needs as many cases as possible to reach meaningful generalisation; even in the case study approach to research (see Lijhpart, 1971). This can be mitigated in the built environment by selecting a geographical area large enough to reflect dynamics of the cities in question. At city level this could be dealt with by selecting cities that reflect most of the policy and programme dynamics of the states in question.

The four cases used in this research (see introduction sections of Chapter Five and Six) reflect most of the pertinent issues in self-help housing in Nairobi and Johannesburg. They also have varied examples of all the housing parameters being investigated. They have adequate presence of the state, the market and civil society in self-help housing. In each city, two cases have been selected to capture both the mainstream and marginal practices in self-help housing. Nairobi and Johannesburg, also reflect most of the political economy issues that impact on self-help housing in both countries, and could be used to produce reasonably generalisable information.

In Nairobi, the cases used are Dandora and Kawangware. Dandora, was selected in this study as an example of a large, initially state-assisted, self-help housing, which has consolidated on its own due to changes in the Kenyan housing policy and practice, and also changes in the policy positions of donors. It reflects the consequences on housing when the state limits its various roles in enabling access to housing. Kawangware, Nairobi, was chosen in this study to reflect unassisted self-help housing processes dominant in the city. It shows different housing dynamics when compared to state-assisted schemes, like Dandora. It also shows the peculiarities of self-help processes initiated and driven by local people.

In Johannesburg the two settlements that were chosen were Ivory Park and Diepsloot. Ivory Park was chosen in this study to reflect a relatively well-located, low-income settlement in Johannesburg, with numerous actors wanting to participate in self-help housing, with different outcomes. Diepsloot was selected in this study to provide insights into how self-help housing networks operate in relatively marginalised low-income settlements in Johannesburg. While it has the same actors as Ivory Park, and similar resources for self-help housing, it shows the extreme disparities that exist in Johannesburg settlements, even amongst the low-income areas.

The comparative research sometimes aims at solving practical problems through transfer of lessons (Hantrais and Steen, 1996). However the two authors suggest that in many instances this approach, particularly at the level of political economy analysis helps understand contextual differences of the phenomena. This research compares self-help housing networks, first within a single political economy, then across political economy, giving insights into issues that are particular in each political economy context, and attributes of self-help housing networks that may be generalisable. This approach enables me to explore various dimensions of the phenomena which are potentially knowledge generating.

1.6.4. Provision, production, and levels of analysis

This research occurs at three levels of housing studies. These are: settlement, city and country levels. The concept of levels of analysis was central to the study. It refers to the spatial interlinking of spaces of research. The three levels offer hierarchies of problem-solution frameworks. Each level provides an opportunity to assess problems and develop solutions (Andranovich and Riposa, 1993: 16). These levels reflect levels at which housing networks occur. Focus on any level without taking cognisance of other levels would only help in giving a skewed picture of what actually happens. These levels also help link micro-and macro-level issues, resolving methodologically need to deal with ‘bonded’ intra group ties and ‘bridged’ ties between groups both in social capital and social network studies.

Four settlements used in this study have each been analysed around the concept of provision and production. Provision means ‘not only government action. But also

issues such as channels of access (formal and informal), the structure of competition and collaboration, and the organisation and communication of interests' (Andranovich and Riposa, 1993: 19). This lens allows the researcher to examine neighbourhood coalitions, city government, special districts, and even street gangs and to delve into ties that bind and effect neighbourhood, city and region (*ibid.*).

Production focuses more on private sector operations. Through this lens one is able to investigate arrangement for production and consumption, their influences and biases and how these are played out in the urban hierarchy (*ibid.*).

In this study, the ties amongst individuals and between individuals and organisations are studied at settlement level. The impact of the state, the market and civil society on these relational attributes is better-understood and studied at city level. This is also the level where structural issues that determine the characteristics of the housing networks are understood. Further, there are broader issues, which are best understood within and beyond political economies. However these have very real local impacts, which take us back to city and settlement levels.

The other challenge I faced after collecting data at all the three levels in two countries was the mode of presentation of the data. My initial approach was to present the discussion hierarchically, starting with the settlements, then the cities, then the countries, and lastly, international comparison. This approach was rife with repetition. My solution was to take an issue oriented approach to structure my arguments and indeed the whole thesis. This enabled the use of the data I had collected, regardless of the level at which they were collected, to support arguments and positions taken in the research. Additionally, an incremental abstraction of housing networks from concrete individual ties, through ties towards collective action to abstract networks of exchange, complemented the approach.

1.6.5. Units of analysis and variables

The other two important concepts in this work are those of units of analysis and variables. Andranovich and Riposa (1993: 47) define units of analysis as 'objects

being studied, such as individuals, cities, or governments'. They define variables as 'something that takes on different values, allowing different levels of measurements'.

It would seem that the unit of analysis of network studies is always the individual, 'ego'. However, the ties of the ego are being studied with a view to using them to illuminate impacts of particular political economies, in Kenya and South Africa, on self-help housing. In this study, the variables being measured are the resources towards self-help housing, namely land, finance, information, labour, materials and technology, and infrastructure and services, i.e. the content of ties. The different 'values' these variables take in different settlements, then later in different cities, start informing us about some of the operations of complex networks in the realm of self-help housing and the implications of these to theory, policy and practice.

The most problematic variable to get accurate information on, particularly at settlement level, was finance. Relatively well to do individual investors in the Nairobi settlements and speculators and shack lords in Johannesburg thought that some of the information I was collecting could be used against them. It was agreed that individuals' identities would be changed unless in cases where they preferred these to be revealed. Some groups also found the issue of finance uncomfortable to discuss, mainly because they did not seem to keep very accurate financial records. However, I went around this by paraphrasing my questions to focus more on how finance is generally accessed in the settlements.

1.6.6. Data collection methods

The major sources of my data were grey and published literature and information from interviews with individuals and organisations working in self-help housing in the four case study settlements in Nairobi and Johannesburg. The background on self-help housing and networks was researched through peer reviewed papers and books at the University of Witwatersrand libraries. Literature on housing in Johannesburg and South Africa was accessed from local authority publications and the University libraries. Published literature on self-help housing in Nairobi and Kenya was accessed through the University of Nairobi libraries, Housing and Building Research Institute's (HABRI's) resource centre, Shelter Forum library; Ministry of Planning, *Herufi*

House library and Ministry of Public Works and Housing library. Some literature was bought from the Government Press in Nairobi. Additionally, grey literature was collected from different organisations operating in the four settlements and from personal collections, especially from Professors at Nairobi University.

Another set of primary data was collected through interviews with key informants in Nairobi and Johannesburg. In Nairobi these included government officials at different levels, namely the local chiefs and councillors, the Nairobi City Council officials and the Ministry of Public Works and Housing officials. In Johannesburg it involved meetings with Ivory Park Housing Manager, Region One and Two Housing Managers, Provincial and City of Johannesburg People's Housing Process (PHP) officials and Ward Councillors. In both countries it involved discussions with academics and role players in civil society. The data derived here was mainly through open ended, issue based, unstructured interviews.

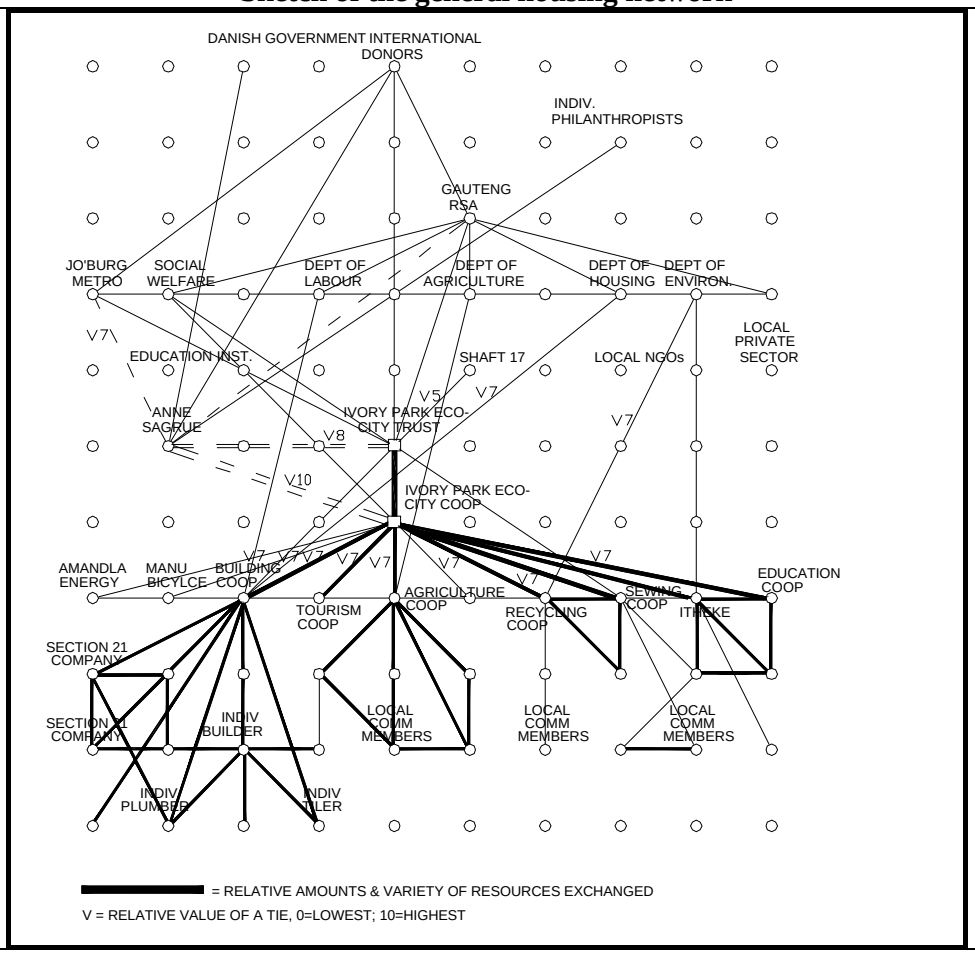
Most of the primary data was collected from individuals and organisations working in self-help housing in the four settlements. The data collection was organised around individuals and institutions. The first involved collecting data from individuals of different income brackets realising own housing provision through self-help. The second involved collecting data from groups like NGOs, CBOs, NPOs and other organisations operating in the case study areas in Nairobi and Johannesburg (see Appendix 8.6 and 8.7 for the list of individuals and organisations).

Individuals and organisations were asked questions around the contacts they used to access land, finance, labour, materials and technology, and infrastructure and services. They were further asked how they sourced information on each of these parameters and how they accessed finance for all of the parameters. They were asked whether they had relationships with international, national and local organisations and individuals, to help them acquire the resources in question. They were further asked if they were aware of other organisations involved in helping people access resources towards self-help housing in the settlements. Individuals were also asked questions around their relationships with other individuals and various organisations that they either belonged to, or which had benefited them in the past towards self-help housing. This first line of questioning enabled detailed mapping and description of relational

attributes (see for example Figure 1.7 and complete data collection sheets in Appendix 8.1 – 8.4).

It was critical the research focus on three categories, namely: individuals whose ego-centric networks were being studied; groups whose networks towards collaborative action were also being analysed, and other players who would help refine the broader socio-political and economic contexts in which these networks operated. These three tier analyses in each of the political economies produced information that could be compared across political economies.

Sketch of the general housing network



Characteristics of the network

Thickness (various); Value (high); Direction (various); Walks (short); Centrality (average); Betweenness (average); In-degree (average); Out-degree (average); Component strength (high); Cliques (many); Structural positions (similar); Isolated trees (few).	-A network with multiple centrality, partly initiated by the need to link together different local organisations. It has evolved from a relatively horizontal network, into a hierarchical one. The horizontal linkages are currently quite weak, because of the structured way in which the government has transformed them. -The network has relatively brief walks, implying that the bureaucracy is not cumbersome. It now relies on an external bureaucracy for its operations. The value of links seemed a lot stronger at the local cooperative levels, but weak across the individual cooperatives. When the 'bridge' (Anne Sagrue) left, the linkages were considerably weakened. It exhibits relatively unidirectional flow of resources, with limited outflows to the community. -It does not exploit existing natural linkages in Ivory Park. However it is more collaborative and gives little room for exploitation of individuals. The network has strong local components & weak global component strength. It is characterised by many structurally equivalent positions in most of the local components. It does not exploit 'found' relationships.

Figure 1.7. Section of data recording sheet: mapping of relational attributes

The impact of individuals and organisations in self-help housing in the settlements was documented through phenomenological approaches. This was done through description of the soft self-help housing outcomes e.g. at the level of community organisation and through documentation of physical impacts of the interventions. The latter was achieved through attachment of photographic evidence, sketches of house plans, plot sizes, etc. An example is the section of data collection sheet below. Complete samples of the data recording sheets are attached in Appendix 8.1 –8.4

Other Organisations Contributing Resources Towards Self-help Housing in the Settlement	**Attach Any Physical Documentation Here**
HDD is aware of activities of NGOs, CBOs, the church & individuals, but do not interact with them, as that has been the culture. They recognize and appreciate the new role the UN-Habitat has started playing in the slum areas in the whole country, where they are also involved.	
Impact / Achievements in the Settlement	
The achievements of this organization in Dandora and neighbouring areas, given its mandate and the resources they had initially, is a bit disappointing. They do not seem to be in control of anything, from plan approvals, development control and community development. There is need to reorganize it so that it could be more effective. The new officers in the department seem to be caught between old practices associated with ubiquitous corruption during the Moi rule and the changes the new NARC government is trying to implement.	

Figure 1.8. Section of data collection sheet: physical impacts

There are two issues to note on data collection from individuals and organisations in Nairobi and Johannesburg that may interest future researchers. Firstly, I did not anticipate the scale of involvement of the church in development in Nairobi's low-income settlements. Most of the organisations that were working in this area both in Kawangware and Dandora were church-based. This was not a factor in Johannesburg though, where the church's involvement in development was almost non-existent in both settlements. The second is on political interests in these settlements. My entry into all the settlements had been greatly assisted by fact that I went through government and local political leadership and established organisations.

1.6.7. A cyclical research strategy

I developed and followed a cyclical research strategy in this work. I realised that there were methodological, theoretical and analytical issues, which could only be adequately dealt with and refined towards the end of the research. The need to capture the complexity of the subject, the non-linear research processes, and the back and forth movement from data collection to analysis and literature review justified this approach. This strategy is diagrammatised in Figure 1.9 below.

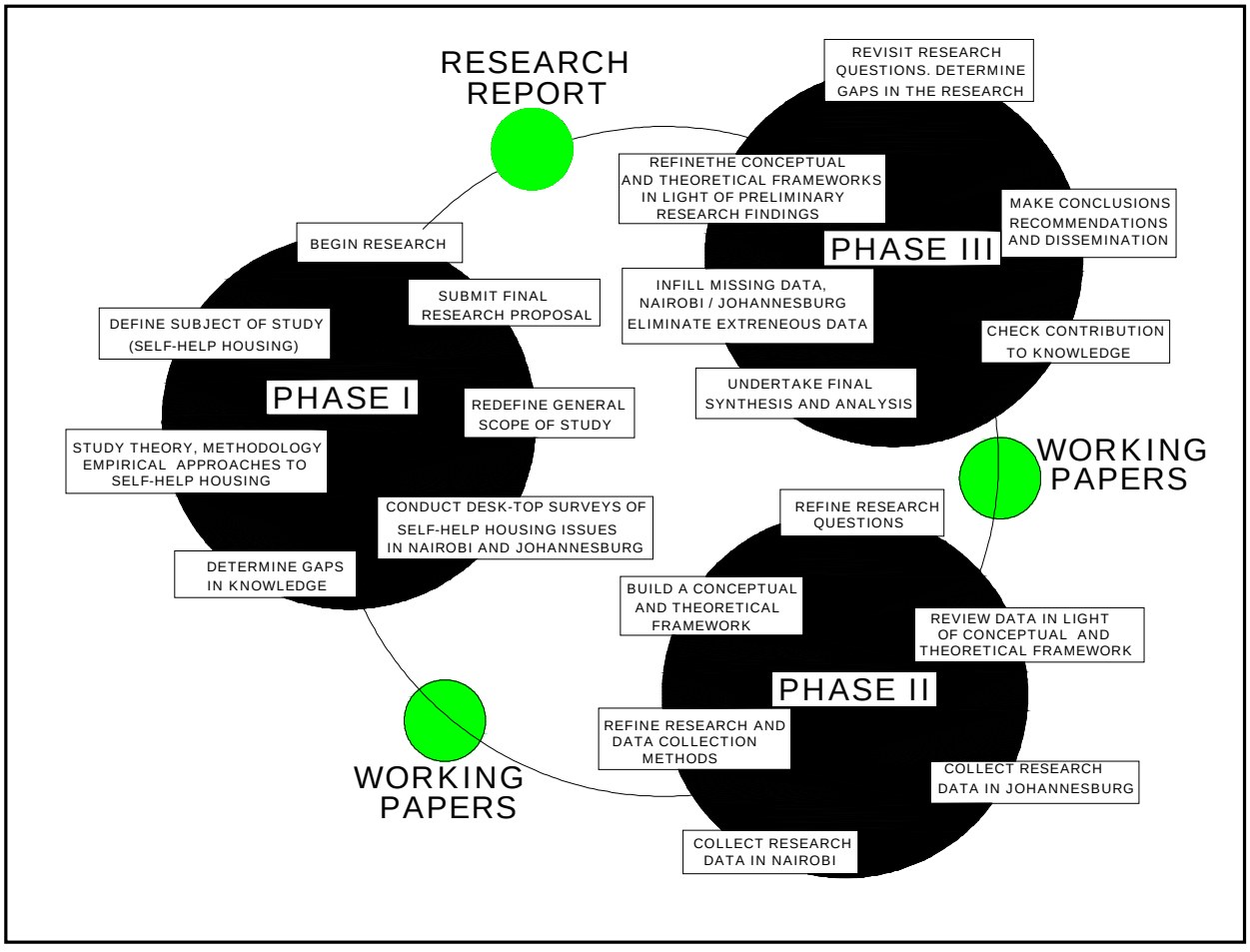


Figure 1.9. Research Strategy

In brief, the process that I followed involved preliminary studies of theory, methodology and practice of self-help housing, together with background studies of self-help housing in Nairobi and Johannesburg, leading to definition of research

objectives and questions. Detailed literature reviews led to development of an analytical framework based on networks. Research and data collection methodologies were clarified through pilot studies. Thereafter, four case studies were chosen. A background literature survey of each of the cases was done. Data collection sheets were developed and filled in on the basis of the background studies. These were refined and used in the Nairobi case studies, then revised for use in Johannesburg. Field studies were conducted in Nairobi and Johannesburg from February to November 2004. The results were analysed in light of ongoing literature reviews and refinement of the conceptual framework. A series of working papers resulted from this part of the study and were discussed in various international conferences, as reflected in the *Acknowledgement* section. This phase led to refinement of the research questions and identification of gaps in the research, which were then responded to. The last phase involved the synthesis and drafting of the thesis, and the examination process and the refinement of the thesis.

1.7. Conclusion

Despite the housing interventions that have happened in Kenya and South Africa, self-help housing remains a dominant way through which the urban poor access their housing. The urban context in which self-help housing happens has become increasingly complex. The intellectual responses to this context are varied: in this thesis they are represented by discussions around social capital and housing networks amongst others. The complexity of the context of self-help housing in Kenya and South Africa calls for alternative tools of analysis, leading to new insights, which would be difficult to perceive otherwise. As reflected in the whole of this study network analysis is one approach.

1.8. Summary and Roadmap

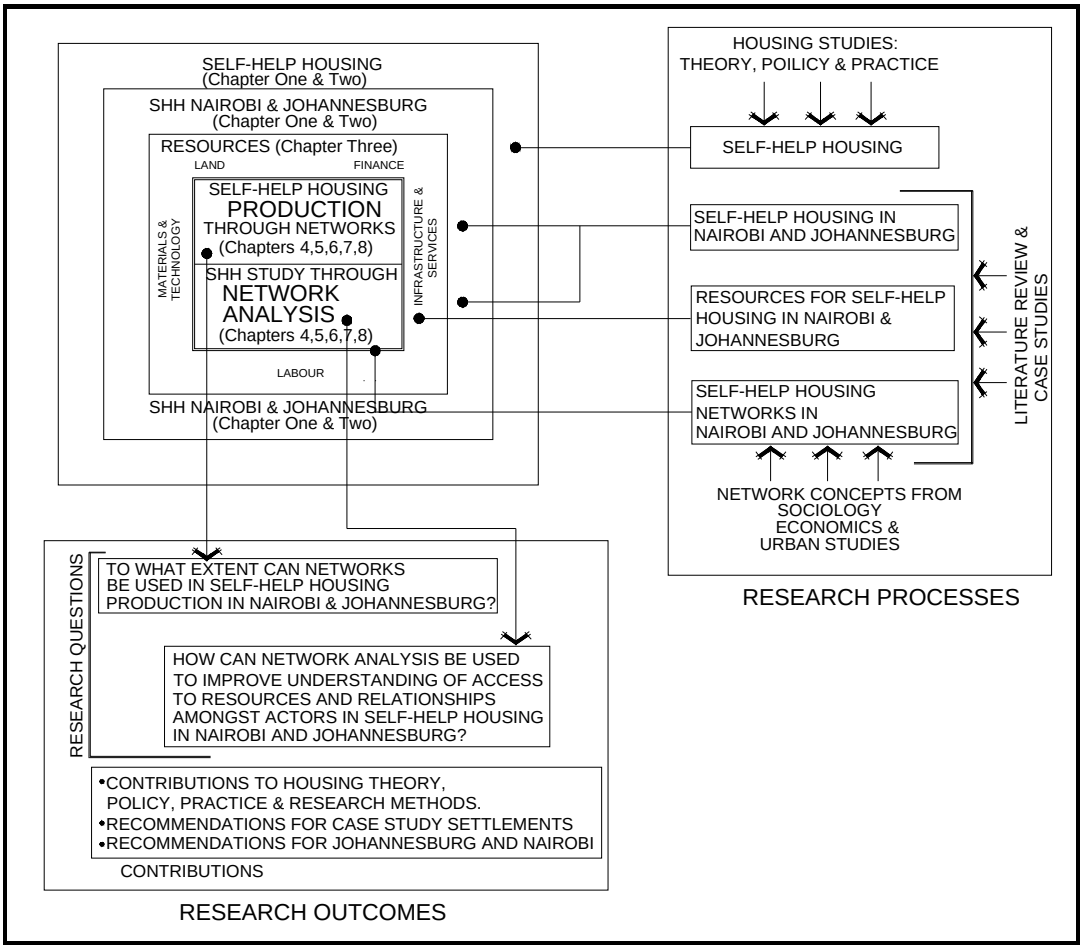


Figure 1.10. Conceptual Framework for the whole study

This chapter is planned as window into the rest of the thesis. I have so far shown that self-help housing is a significant area of concern in Nairobi and Johannesburg, and that some of the emerging issues relating to this mode of production could be explored through network analysis. The chapter also outlines key research processes. Figure 1.9 shows the outline of the overall conceptual framework for the study, which I explain briefly in the next paragraph.

Overall, the study looks at theory, policy and practice of self-help housing, and the contribution that network analysis could make to these. It starts by exploring current self-help housing policies, and theories applied to understanding those (Chapter Two).

It then narrows down to self-help housing issues in Nairobi and Johannesburg; more specifically to reviews of various resources that are employed for self-help housing in the two cities (Chapters, One, Two and Three). After this, the study develops a theoretical and analytical framework for self-help housing networks (Chapter Four). This is then used as the lens to study actors and resources for self-help housing in Nairobi and Johannesburg (Chapters Five, Six and Seven). The focus of this analysis is dual, namely assessment of the potential of self-help housing production through networks and assessment of the usefulness of the network framework for self-help housing analysis. The next six paragraphs give outlines of the other chapters.

Chapter Two puts the neo-liberal policy bases of self-help housing in Kenya and South Africa into the broader context of international policy agencies' position on housing and also on the broader political economies pursued in the two countries, arguing that these influences have been direct in Kenya and through voluntary alignment in post-apartheid South Africa. However, in Kenya self-help policies remain abstract, having little relationship with practices on the ground. In post-apartheid South Africa, there have been limited attempts to find out why people are not building durable houses in the cities, in spite of the state's policy and people's own desires to do so. However, in spite of theoretical criticisms of state-assisted self-help housing, and the responses thereof, the self-help phenomenon persists and remains relevant to low-income housing production in the two countries. This begs the question: whither self-help housing? From a theoretical perspective this calls for alternative conceptualisations of the phenomenon.

Chapter Three compares resources towards self-help housing in Nairobi and Johannesburg. The resources reviewed are land, finance, labour, materials and technology, and infrastructure and services. The chapter is a background to the resources studied in self-help housing networks in Nairobi and Johannesburg in subsequent chapters.

Chapter Four develops the theoretical and analytical framework for engaging with self-help housing networks. The key position in the chapter is that sector-based theories and approaches to self-help housing intervention, though important, do not deal adequately with the complex relationships of actors in self-help housing. These

relationships do affect the outcome of self-help housing efforts. Importantly, it is through these ties that resources are exchanged. The chapter grapples with the following, amongst other questions: What sorts of relationships exist amongst actors in self-help housing? What are the impacts of these relationships in this mode of housing production? What options do we have to help understand these relational attributes? How can the resources available and used in self-help housing be better mapped? The chapter outlines the key network concepts and terminologies employed in analysis in the subsequent chapters. It particularly Chapter 4 develops four levels of abstraction in analysing housing networks in this thesis, namely: ego-centric networks; networks of collaborative action; networks of exchange and hierarchies.

Chapter Five engages with the types of networks that exist when the state withdraws from intervention in the public domain. This is either through withdrawal by the state from direct involvement in development of infrastructure, services, social amenities and housing, or through weak regulation of the market. In this context, networks, as opposed to hierarchies, seem to be the dominant means through which self-help housing and related services are accessed. However, these networks are prone to exploitation by elements within the state, the market and civil society. This is the case in Nairobi, Kenya.

Chapter Six deals with self-help housing networks in an interventionist state (South Africa), which delivers development mainly through the market. The argument here is that interventions and regulation by the state and operations of the market have structural impacts on relational attributes of actors in self-help housing. This results in weakening of ties that deliver self-help housing outside of the state and the market, and results in chronic dependency. It also results in distortion of relational attributes and their outcomes, as there is a tendency to mimic state housing processes and outcomes. With examples from Johannesburg, I argue that the intervention of the state and the market should give space for strengthening of found networks, rather than replacing these with new, often very weak hierarchies.

Chapter Seven, focuses on the extent to which networks as opposed to state market hierarchies and decentralised housing systems could be used in housing production. The chapter compares key self-help housing network attributes in Nairobi and

Johannesburg. It then compares the networks used to access land, finance, labour, materials and technology and infrastructure and services in both cities. The chapter shows that while international networks are dominant in access to finance, local networks are very active in access to labour materials and technology in Nairobi and Johannesburg. The former facilitates international flows of finance, while the latter limits uptake of alternative materials and technology, and architectural expression. The chapter also shows that infrastructure and services are predominantly accessed through state market hierarchies. The chapter concludes that networks should only be a third way of housing production, through self-help, in addition to state/market hierarchies and decentralised systems. The thesis closes with a discussion on the contribution of this self-help housing networks study to housing policy, theories, policy and methods.