Rethinking spatial planning

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Abstract

In South Africa, broad spatial frameworks have become a standard form of planning, but have been critiqued on various grounds. This paper focuses on three lines along which spatial planning may be reconsidered. First, it argues that it is important for planners to engage with the complexity of the socio-spatial dynamics of the city. Secondly, it suggests that planners need a deeper understanding of urban economic space and a more conscious consideration of the way in which planning relates to markets. Thirdly, spatial planning could be enhanced by a stronger link to infrastructure planning.

HERDINK RUIMTELIKE BEPLANNING

Breë ruimtelike raamwerke het 'n standaard vorm van beplanning in Suid-Afrika geword, maar hierdie is op verskeie gronde gekritiseer. Hierdie artikel fokus op drie lyne waarvolgens ruimtelike beplanning oorweeg mag word. Eerstens, word geargumenteer dat dit belangrik is vir beplanners om die kompleksiteit van die sosio-ruimtelike dinamiek van die stad te hanteer. Tweedens, word voorgestel dat beplanners 'n sterker begrip van stedelike ekonomiese ruimte en 'n meer bewustelike oorweging van die manier waarop beplanning met markte geassosieer word, benodig. Derdens, kan ruimtelike beplanning versterk word deur 'n sterker band met infrastruktuurbeplanning te hê.

MORALO WA TIKOLOHO WA TEKOLOBOTJHA

Meralo e pharalletseng ya tikoloho Afrika Borwa e bile mokgwa o amohelehang wa ho rala, empa hona ho ile ha sehollwa mabakeng a mmalwa. Pampiri ena e itshetlehile hodima mela e meraro eo moralo wa tikoloho o lokelang ho shejwa ka yona. Ntlheng ya pele, e leka ho bontsha bohlokwa ba diradi ho tshwarahana le ho rarahana ho pharalletseng ha tikoloho ya boahi ya motsemoholo. Ntlha ya bobedi, e sisinya hore diradi di hloka kutlwisiso e batsi ya sebaka sa moruo wa toropong le ho ela hloko ka moo ho rala ho amanang le mebaraka ka teng. Ntlha ya boraro, moralo wa tikoloho o ka matlafatswa ke kgokahano e matla ho boradi ba infrastratjha.

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1. INTRODUCTION

In post-apartheid South Africa spatial frameworks relying on an abstract design approach, and centred on the use of nodes and corridors became a standard form of planning. This approach, in conjunction with arguments for urban compaction, tended to be broadly based, and focused on indicative guidance for spatial development. In many respects, it could be regarded as a reaction to earlier forms of planning, both internationally and in South Africa: the predominance of prescriptive land use regulation and comprehensive planning, which many agreed was static and could not cope with change.

Yet the practice of spatial framework planning in South Africa has failed as several critiques have shown (Harrison *et al.*, 2008; Todes, 2006; Watson, 2002). Spatial frameworks have been too broad and too utopian, and have been contradicted by both national policy and trends in the property and housing markets. They are neglected in site level decision-making, and do not link sufficiently to land use management, or to infrastructure planning. Some municipalities are moving beyond these criticisms towards 'harder' plans, more closely linked to both infrastructure and land use management. In many cases, however, spatial plans remain concept-driven, and the older criticisms remain.

There are several ways in which spatial planning could be enhanced. The important environmental dimensions, for example, have been noted (Todes *et al*., 2005, Todes *et al*., 2007). This article focuses on three lines along which spatial planning may be reconsidered. First, it argues that it is important for planners to engage with the complexity of the socio-spatial dynamics of the city. Secondly, it suggests that planners need a deeper understanding of urban economic space and a more conscious consideration of the way in which planning relates to markets. Thirdly, spatial planning could be enhanced by a stronger link to infrastructure planning – an element which is being explored in several cities. These three aspects will be explored in turn, and the implications for spatial planning will be considered.

2. THE MULTIPLEX CITY AND SOCIAL DYNAMICS

Analysis for spatial framework planning in South Africa has not paid much attention to the socio-spatial dynamics of cities. Indeed, the focus on spatial concepts such as nodes and corridors, densification and infill, have arguably diverted attention from the need to understand how different groups of people locate and move within the city, what underpins these choices, and the implications of these patterns for their survival and livelihoods. Yet cities and regions are increasingly complex spatially: they are multi-centred, with multiple locations of economic activity and complex movements – what Healey (2000: 518) terms the multiplex region. It is critical to understand movement and settlement patterns in this context, and what 'good location' and accessibility mean for various groups of people.

The literature debating the idea of a compact city has pointed to variations in the needs of low-income households and their livelihood strategies (Schoonraad, 2000; Biermann, 2003; Todes, 2003; Benit & Morange, 2005), and raised questions concerning a uniform approach to urban spatial organisation. While Benit & Morange (2005) show how poor location affects the opportunities of domestic workers to access employment, as well as the conditions under which they work, reinforcing traditional critiques of the apartheid city, others argue that the declining formal employment and an increasing reliance by the poor on diverse survival strategies have made central location less important (Schoonraad, 2000; Biermann 2003; Cross *et al*., 1996). For instance, Schoonraad's (2000) work on Pretoria suggests that the larger sites that are available on the periphery give households the flexibility to accommodate changes in life cycle, to maintain social networks, and to diversify income sources by means of sub-letting and urban agriculture. Daily living costs are lower than in more centrally located areas, and households manage by sending one person to work in town, limiting the impact of transport costs.

Biermann's (2003) work has made the important point that what constitutes 'good location' needs to be assessed and cannot be assumed *a priori*. For instance, she showed how residents of a seemingly peripheral location had far better access to employment than often assumed, due to a large extent to the increasingly diverse location of economic activity across cities.

Standard spatial planning concepts make implicit assumptions about the nature of employment, livelihood and movement patterns that may not be borne out by a closer analysis. Biermann (2003) questions notions of 'urban edge', and the focus on nodes and corridors oriented to formal employment. Godehart's (2007) work on KwaMashu shows that the predominant emphasis on larger scale nodes and corridors misses the way informal activities organise spatially at a more local level, and how they might be supported. In Cato Manor, taxi routes bypassed the planned corridors, undermining their viability. There is scant literature on how higher-income groups locate, move and use space in cities. In many respects a concept-driven approach to spatial planning, a focus on abstract structuring devices, diverts attention away from the need to understand how people use space, how movement patterns occur, and to question how spatial planning might respond appropriately.

3. PLANNING AND THE ECONOMY

Although planners have often moved into the realm of local economic development, very little attention has been paid to the workings of the 'real economy' of the city (Harris, 1990: 10),[1] and its spatial organisation in the South African context. The need for particular kinds of space (what kind of economic activity, where and how much), and associated requirements for infrastructure, and the links to spatial planning at a strategic and more local level are rarely made. The use of a 'design' approach, using abstract concepts of nodes and corridors to structure spatial frameworks, has meant that these kinds of analyses are not considered important and are thus rarely undertaken.

The basic point of departure of the design approach used is that the creation of an appropriate spatial structure (main routes, nodal points) will lead business to locate as desired by the plan, following lines of accessibility. This more flexible approach differs from the focus of traditional structure planning and master planning, i.e. predicting the land requirements for particular land uses. Its implicit conceptual basis is small-scale competitive markets, and it provides a good description of how informal trade organises spatially (Dewar & Watson, 1981, 1990; Dierwechter, 2002). It is also useful in designing space to enable these activities. However, it does not consider how much economic space of different types is likely to be used, and it does not pay specific attention to larger and more monopolised economic activity. Nor does it provide sufficient direction for infrastructure planners, as the following section argues.

Strategic spatial plans are necessarily broadly based as they must address long-term development directions. However, there are many cases where concepts of nodes and corridors are used without considering economic dynamics and potentials, or what the real prospects for development might be over the long term. It is not unusual to find plans with corridors promising development in places which have little economic activity at present, and limited apparent prospects for economic development. There are also problems in moving from this broad, abstract level to more immediate development (Harrison *et al*., 2008).

The Cato Manor Development Project in Durban provides a good example of some of these issues. While the project was developed with considerable thought and attention, the use of the broad nodes/corridors concept meant that the planners did not engage sufficiently with how much economic development was likely or possible. An early plan depicted nodes and corridors over a large area, which proved to be well beyond what could be supported. Even a small shopping centre on the main corridor proved to be much greater than could be supported. There were several contributory factors to this disjuncture: the project was not able to include middle-income groups, and incomes were much lower than expected; the close proximity of the area to the city centre and to a large shopping centre, and taxi routes which bypassed anticipated retail areas (Dewar & Kaplan, 2004). Not all of this could have been predicted, yet the use of these broad concepts meant that planners did not engage sufficiently with the likely parameters for development (Harrison, *et al*., 2008).

[1] This section draws from Harrison *et al*., 2008

The design approach and the use of abstract nodes/corridors to enable development also do not engage with the way in which the large-scale property industry is shaping space. South Africa's property and retail industry is to a large extent focused on car-using middle-income consumers. It promotes the development of shopping centres and decentralised offices along freeways, far from areas of poverty. These patterns are often contrary to the intention of spatial frameworks and to normative principles, yet few plans have policies which respond to these patterns. Of course, developers must apply for planning permission for these activities, but in practice land use decision-making has been relatively *laissez faire*, and driven by developer needs. This is particularly the case for mega-projects which in fact dominate decision-making.

The looseness of spatial frameworks, the emphasis on planning as facilitation and the reaction to old-style planning as control has enabled these trends. But there is also an implicit dominance of growth and competitiveness as a discourse. In fact, planners have not yet taken on the debate on how planning should relate to markets. There is a need to return to the basic principles of the just and sustainable city which many of the normative principles guiding planning hope to achieve, and to begin to debate how planning relates to markets in this context.

4. LINKING SPATIAL PLANNING AND INFRASTRUCTURE PLANNING

Internationally, traditional approaches to spatial planning attempted to align land use planning with infrastructure planning by means of a comprehensive master planning approach and state-driven provision of infrastructure. Traditional planning developed targets for land uses and densities in particular areas, and infrastructure planning was intended to follow spatial planning (Biermann, 1998; Graham & Marvin, 2001). However, in many developing countries, infrastructural development occurred through agencies operating through silos (see eg. Sivimakrishan & Green, 1986), which tended to bypass spatial plans. Comprehensive planning meant that it took years for plans to be produced, and they were soon out of date, undermining their legitimacy and usefulness. Thus infrastructure planning with its own spatial logic was more powerful in shaping the spatial structure of cities than spatial planning. This was also the case in South Africa, where spatial planning for cities was fragmented (Mabin, 1994), and spatial development was more the outcome of powerful infrastructure planning such as transport or water (see Todes, 2002 on Durban) and of the racial legislation.

From the 1980s, in many countries, processes of 'unbundling' infrastructure development by means of privatisation, corporatisation, and developer-driven development have underpinned the creation of sprawling, fragmented and divided cities (Graham & Marvin, 2001). The emphasis on 'mega-projects' disjointed from spatial planning, and often developed on a corporatised or privatised basis, is also contributing to these trends (eg. see Swyngedouw *et al*., 2002 on Europe, and Shatkin, 2007 on Asia). Mega-projects include both public and private initiatives and range from residential, office and mixed use complexes to stadia developed around event tourism, airports and the like. Several developments in South Africa, including some of the 2010 stadia and airports, do not follow spatial plans, and indeed are driving development in particular directions. Privatised or even individualised provision of infrastructure is also occurring in contexts where large-scale systems of infrastructure are inoperable or only serve a small part of cities, such as in some African cities.

There is, however, a growing critique of these approaches and outcomes, and an increasing interest in strategic spatial planning to direct development. Much of the academic literature focuses on strategic spatial planning as a discursive process (e.g. see Healey 2007), centred on gaining agreement on particular spatial development paths. There is also an increasing emphasis in practice on evidence-based spatial planning, particularly in the United Kingdom, with greater attention to harder analysis and well-based arguments for particular planning solutions (RTPI *et al*., 2006; DCD, 2006). Linked to these trends is the increasing exploration and innovative experimentation internationally and locally regarding how spatial planning and infrastructure development might be brought together.

In developing countries, spatial planning as a guide to infrastructure planning is leading some of the current thinking on new, appropriate forms of strategic spatial planning. In Indonesia, Integrated Infrastructure Development Planning attempted to link infrastructure development to spatial planning. This form of planning arose from action planning, and was regarded as an innovative alternative to master planning. In practice, it was relatively unsuccessful, mainly due to the lack of political buy-in, and poor capacity at municipal level (Mattingly & Winarso, 2000). Nevertheless, such forms of planning are being promoted in training courses by the influential Development Planning Unit, University College London (Mattingly, 2001), and by the UN-Habitat in its flexible structure plans for post-disaster areas, among others (UN-Habitat, 2006).

There are several international initiatives to link spatial planning to infrastructure planning, most notably the well-documented case of Curitiba which linked spatial planning to transport developments, the smart growth movement and the promotion of transit-oriented development. The 1998 World Cup stadium in Paris provides a relatively unusual instance in which a mega-project was guided by and reinforced the intentions of an existing spatial plan (Lecroart, 2007).

In Australia, there are several examples of planning processes which link spatial planning to infrastructure planning. These have emerged in reaction to the fragmentation resulting from market-based and performance-oriented planning. The focus in this instance is on long-term plans centred on land-use transport linkages, with the assumption that other forms of infrastructure can follow. Although this kind of planning is relatively new, analysts (SGS, 2006) argue that the success of these plans is contingent on good analysis of demographic, housing and employment trends and projections; funding and pricing which reinforces the plan, in addition to strong champions and agencies for co-ordination. It also requires widespread acceptance of and buying into the plan, and its consistent use in decision-making (SGS, 2006).

In the South African context, broadly based strategic spatial frameworks of the post-apartheid era offered insufficient guidance for infrastructure planners. For instance, in 2000, a study in eThekwini (Todes, 2002) found that spatial frameworks were too broad to give guidance to infrastructure departments, which continued with their own planning. Nor were notions such as nodes and corridors meaningful for

departments such as water and waste. Ironically, the more traditional estimates of density and land use were more useful to these departments. However, there has since been an exploration of the use of models to understand capacity and costs, combining infrastructure planning and spatial intentions. The value of a well-grounded spatial plan is emerging in this context (Breetzke, 2008).

In Cape Town, recent attempts to enhance the spatial framework found that there was little relationship between areas where infrastructural capacity existed for intensification and the areas of densification suggested by the spatial framework. Areas of capacity have now been mapped, and the spatial framework now links areas for future development and intensification to infrastructural development. This approach contrasts with the predominant practice of allowing developers to locate where they wish on the grounds that their developer contributions mean that they are in effect paying for development. It suggests a new approach where spatial planning is giving direction to where and how developers locate and develop, in accordance with the plan (Walker, 2008).

In Johannesburg, infrastructure limits, particularly with regard to power and other services, have resulted in the development of a growth management strategy, which is carefully managing development permissions in terms of spatial plans (Ahmed, 2008). The spatial framework has also been cascaded into regional and local plans, increasing the level of specificity of the plan.

The recent Council for Scientific and Industrial Research/Human Sciences Research Council project for the Departments of Science of Technology, Housing and Transport provides a further example of South African initiatives to explore the relationship between spatial planning and infrastructure planning, in this case by using urban growth modelling (CSIR, 2008).

South African initiatives are relatively recent, but some evidence from these (eg. Breetzke, 2008) and international initiatives suggests that their success is likely to depend on strong, credible spatial plans which have both political and stakeholder buy-in, and are well founded in terms of their analysis of spatial demographic and economic trends and patterns, and property market analyses. This suggests a need for deeper, more quantitative analyses, and for greater engagement between spatial and infrastructure planners, as well as a strong emphasis on the kind of discursive approach suggested by Healey (2007), creating a wide level of acceptance of the plan by both politicians, developers and other stakeholders, and the public in general.

5. CONCLUSION

This article has argued that there is a need to take a step forward in our strategic spatial plans. The broad design-based spatial frameworks have been inadequate in several ways. This article has highlighted their limits in understanding the spatial organisation of cities and their complexity, particularly in terms of the socio-demographic trends and patterns of movement and settlement, and in terms of the spatial organisation of economic activities. It has also pointed to their limits from the perspective of infrastructure planning.

Planning, however, is at an interesting moment when its value is being rediscovered internationally. The new interest in planning is linked *inter alia* to a reaction to the fragmentation resulting from a purely market-driven approach in many contexts. One key element of the new focus on strategic spatial planning is in linking spatial planning to infrastructure planning. This approach requires a deeper understanding of the social and economic dynamics of the city and their spatial implications than has generally been the case in South Africa, and an ability to project forward development requirements over the longer term in order to inform infrastructure development. This suggests the need for a stronger analytical and technical basis for planning than has generally been the case in the past.

There are obvious limits in the extent to which planning can transform cities. As Bertaud (2008) has argued, urban spatial change is slow and relatively path dependent. In fact, planners need to work to a large extent around existing patterns, and this requires a better understanding of the socio-spatial and economic dynamics of cities and how they are changing. Most authors, however, also point to the importance of using the ideas and directions in spatial planning consistently in decision-making at all levels, and for coherence between spatial planning ideas and policy instruments. This requires strong political and stakeholder buy-in, and an agreement to use the plan as a key decision-making tool. The discursive element of spatial planning should therefore not be neglected. In the South African context, a discussion of how planning relates to markets is critical in this respect.

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