Managing change in urban transitional areas: some informants on the nature of regional plans

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Abstract

Regional planning has had a chequered career internationally, and not least in South Africa. However, it is becoming increasingly apparent that a lack of spatial direction to processes of settlement formation at a larger scale may have disastrous longer term social economic, environmental and cultural affects. The problem is aggravated in South Africa by a serious lack of capacity to develop creative management plans at all scales. This dilemma of capacity has fundamental implications for the nature of plans: in particular, the absolute necessity of embracing a philosophy of minimalism. This paper explores an easily accessible conceptual framework for thinking about regional space in relation to a particular problematic form and scale of areas: urban transition areas occurring in and around metropolitan areas and larger towns. Above all else, these areas are characterised by rapid and frequently accelerating change as they are increasingly drawn into the force fields of the larger settlement.

DIE BESTUUR VAN VERADERINGE IN STEDELIKE OORGANGSGEBIEDE: SEKERE RIGTINGWYSERS OOR DIE AARD VAN STREEKSPLANNE

Streekbeplanning is 'n geskakeerde loopbaan, internasionaal. In Suid-Afrika verloop sake nie veel anders nie. Desnieteenstaande word dit al hoe meer duidelik dat 'n gebrek aan ruimtelike rigtingwysers by die grootskaalse nedersettings, rampspoedige langtermyn effek kan hê op sosiaal-ekonomies, omgewings- en kulturele gebied. Die probleem word verder vergerger deur 'n gebrek aan kapasiteit om kreatiewe bestuursplanne op alle skale te ontwikkel. Hierdie dilemma van kapasiteit hou fundamentele gevolge in vir die aard van sulke planne: in die besonder die absolute noodsaaklikheid vir die bevordering van die filosofie van minimalisme. Hierdie artikel ondersoek 'n toeganklike konseptuele raamwerk vir denke rondom streeksruimte in verhouding tot die besondere problematiek rondom die vorm en omvang/scale van area: die oorgangsones wat tussen stad en platteland in en rondom metropole en groter stede voorkom. Bowenal word hierdie areas gekenmerk deur vinnige en opophoudelike veranderinge deurdat hulle ingetrek word in die kragvelde van groter dorpe.

HO KENYA DIPHETOHO DIBAKENG TSA METSE YA DITOROPO YA PHETISETSO: BATLALEHI BA BANG TABENG E MABAPI LE MERALO YA MABATOWA

Meralo ea mabatowa e shebane le liphetoho tse ngata mose ho mawatle le hona mona Africa Borwa. Le ha ho le jwalo, hoo ho bonahala ho ka nna ha senya meralo e metle ea lefatshe le metse ka kakaretso. Ho na ho ka baka maemo a hlobaetsang, haholo moruong oa naha, metseng, tlholehong le setso sa rona ka nako e telele. Bothata bona mona Africa Borwa bo eketsoa haholo ke phokolo e teng ea ho aha meralo ea ketapele le tsamaiso mekhahlelong ka ho fapana. Mathata ana a tlhokeho ea boitsebelo e tlisa mathata a mangata meralong ea naha, mohlala; haholo holo nthleng ea ho ananela liphetoho tsa ho fokotsa sekhahla seo meralo e etsoang ka oona. Phatlalatso ena e shebane ka kotloloho le mekhoa e bonolo ea ho sebetsana le mabatowa ka mokhoa o bonolo haholo libakeng tse nang le mathata a mangata a fapaneng. Hona ho bolela metsana e pela litoropo tse kholo le tsona litorotswana. Libaka tsena ha ngata ho fumaneha hore ke tseo ho tsona phetoho ea maphelo a batho e etsahalang ka sekhahla, hoo ha ngata metsana ena e tjena e iphumanang e shwa e qetella e le ntho e le nngwe le litoropo tsena tse khololwanyane.

INTRODUCTION: THE PROBLEM

The 1960s and early 1970s were the golden years of regional planning in the western world. Through the fusion of different theoretical strands (rank size theory; Rostownian stages of growth theory; John Friedman's regional core-periphery model; growth pole theory; and the theory of innovation – diffusion) it seemed as if modernist regional planners were in possession not only of the identity of the ingredients of 'development' but also of the spatial instruments by which the ingredients could be spread to underdeveloped peripheral areas.

As increasing empirical evidence emerged on the relative failure of ambitious regional projects internationally, particularly in developing countries, and as it became increasingly apparent the development trajectory of developing countries would not umproblemmatically follow that of the developed world, however, confidence in regional planning has eroded steadily. This has particularly been the case in South Africa, where failure has been exacerbated by the fact that development rhetoric was cynically appropriated to give credibility to the ideology of apartheid or separate development.

It has become increasingly apparent, however, that it remains a very important scale of spatial planning, not necessarily to promote dreams of rapid economic growth but, less ambitiously to guide processes of settlement formation so that relatively stable and efficient settlements result.

The regional, rural and peri-urban areas (defined here as those spatial zones within which livelihoods are linked to both urban and rural activities) around metropolitan areas and large towns and cities in Southern Africa (and, indeed, in many other parts of the developing world) represent a particular type of problem in terms of settlement formation. Above all else, these areas are characterised by rapid, and frequently accelerating, change as they are increasingly drawn into the urban force field of the larger settlement. Change affects almost all dimensions of daily life: *inter alia* ,

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patterns of settlement formation as intensification occurs, demographic structure and household composition, livelihoods, values, social organisation and so on. Indeed, in many of these places it seems that change is the only constant.

In settlement terms, two primary forms of growth and change are dominant. In places of relatively high amenity, growth is commonly private sector led. Places of high amenity are targeted by developers for developments aimed at an upper income target market (of which lifestyle-marketed developments such as golf-course estates or 'eco-estates' are an increasingly common form), or tourist-related initiatives such as resorts, up-market bed and breakfast establishments and restaurants (the Stellenbosch-Franschoek area in the Western Cape is a good example). The problem with the pattern is that, while the affect of any one project individually may not be great, the collective, uncoordinated proliferation of them undermines the qualities that defined the amenity of the area in the first place.

The second common form of process is informal. The nature of change in settlement patterns is complex and subtle and involves the explosion of the 'mega-village': processes are driven by households (as opposed to any directive top-down actions), acting in their own perceived (but often short-term) self-interest and, both locationally and in form, are a response to a wide variety of conditions (for example, kinship ties, conditions of tenure, access to water and other natural resources and access to markets), in an on-going struggle for survival. Processes of this kind can be observed in many places: for example, in South Africa around Johannesburg, Umtata, Port Elizabeth, Durban, Phuthaditjhaba, Pretoria, around Maseru in Lesotho, around Windhoek in Namibia). While the detailed settlement patterns are frequently different, however, a common characteristic is that of scatter or sprawl.

In the face of these dynamics, the authorities charged with the management of these areas are at a loss as to what to do. Traditional instruments and models of spatial management do not seem applicable:

- Peri-urban approaches offer little since there are few overt urban-rural or rural-urban linkages evident for conscious strengthening.
- Conventional regional plans that concentrate on hierarchies of nodal settlement, regional transportation, water and regional economic development are little use in giving guidance, precisely because new forms of settlements hierarchy (partly urban, partly regional) are in the process of being formed.
- Urban plans tend to deal with defined urban precincts, that take priority largely because of the political influence of entrenched political elites.

Particularly, there is considerable uncertainty surrounding the scale and pace of future urban growth and furthermore, the traditional distinction between urban and rural areas has become insufficient for many purposes (Cohen, 2004:64).

Perhaps above all, there is little or no human resource capacity to deal with new situations. This is not a 'problem' that is going to disappear in the short to medium term. It must be factored in, in determining the nature of effective and appropriate plans. In the face of this, the most common response is simply reactive, particularly in terms of public investment. However, this response frequently creates a whole variety of problems. These include:

- Extensive ecological damage that degrades the natural resource base and thus reduces the sustainability of households' livelihoods
- The piecemeal erosion of the qualities that made the area desirable in the first place
- Reduced chances for households: Frequently, over time, the settlement pattern fails to yield the benefits of either urban or of rural living. While the initial settlement decision is usually a logical one in terms of the household, it is often made in the face of woefully few and often poor choices
- The settlement pattern is frequently highly inefficient in terms of the public provision of utility services and investments in social infrastructure and is often accompanied by increases in public health problems. 'Who gets' is primarily determined by political arm-wrestling rather than a longer-term rationality that leads to a sustained improvement over time. The competition for scarce resources becomes socially divisive between communities and even households, and co-ordination of different kinds of public investment becomes very difficult – these areas effectively become bottomless pits, in that they can absorb large amounts of investment, without discernable improvements in the quality either of the environment or of life
- As a result of the scattered pattern of development, efficient, viable public transportation, which is critical to increasing choices, never takes root: many households are effectively trapped in space and this dramatically reduces their longer-term social and economic manoeuvrability
- The interests of the poorest, most marginalized households that are frequently dependent on survivalist activities, are overrun by more powerful, competitive social units: frequently the poorest are worse off than ever before
- Perhaps most important of all, longer-term options are irrevocably removed. There is no recognition that the region of today is the city of tomorrow: commonly, the reactive initial patterns of investment cannot be incorporated into cohesive urban systems at a later date.

This article argues that clearly in terms of the broader public interest, some form of directive spatial planning is necessary, particularly in terms of guiding public investment. However, this planning does not need to be comprehensive, nor based on exhaustive analysis. The paper outlines a conceptual approach to identifying an appropriate minimalist form of plan in these circumstances. It is based on the acceptance of a straightforward, access-driven

approach, that can easily be implemented under different circumstances.

The focus of the paper is on spatial organisation, but this has implications for some basic economic policies and institutional arrangements, that are also briefly discussed. For clarity, the argument is developed in relation to abstract undifferentiated space. Clearly, however, in reality contextual specifications would mould the plans into very different forms, from place to place. The approach is discussed in terms of the most common form of peri-urban development in Southern Africa (those developing through informal processes) but the same arguments relate to development led by the private sector, particularly in relation to the natural environment.

The paper is structured into three main sections. The first overtly addresses the starting points that underpin the conceptual approach to plan-making. The second section outlines the approach to spatial organisation. In this, the green system and the built system (led by public investment) are initially discussed separately and then are brought into relationship with each other. Finally, three central, a-spatial dimensions of choice and access, which are frequently threatened or destroyed by the urbanisation process, and which need to be addressed consciously in the process of plan formulation, are briefly discussed.

SOME STARTING POINTS

There are a number of central starting points that inform the approach that follows:

- Informal processes of settlement formation are not aberrations nor are they temporary phenomena. It is essential to learn to work pro-actively with these.
- Plan making must be driven from a public good perspective. It is not about imposing particular lifestyles or promoting the needs of one or another individual or group over others. Rather, it is about optimising conditions that benefit large numbers of people, now and in the future, and ensuring that self-interest actions of some do not unreasonably remove the rights of others. Within this general concern considerable freedom can and should be allowed.
- The concept of sustainability must be central to processes of plan formulation. This concept needs to be explored from both a natural environmental as well as a humanist perspective.
- From a humanist perspective, the central issue is maximizing choices and opportunities for people. Choice relates essentially to lifestyle and livelihood. This concern with choice has two dimensions. Firstly, in situations of poverty, the most basic, and hence most accessible, form of choice derives from valued traditional and vernacular activities that have endured over ages. This does not necessarily suggest replication. Rather, it involves conserving some existing opportunities and building upon principles which underpin vernacular ways of life. The second is consciously to create new kinds of choices.
- Choice is only expressed through constraint. The central planning question, therefore, is what is the most appropriate form of constraint that protects the public good (by ensuring that individual actions do not reduce the reasonable rights of others) while at the same time increasing choices. Commonly, this constraint has both regulatory and budgeting dimensions. By far the most important of these is public spending. The primary purpose of a plan, therefore, should be to direct and prioritise public investment: to inform the emergence of a public investment framework. Elements of the public framework include public space, movement, public or community facilities, utility services, emergency services and, where appropriate, economic infrastructure for embryonic economic activity.
- The transitional region of today is the city of tomorrow. This calls for planning which integrates conventionally different approaches to city and regional planning. A strong theme running through the paper is that a flexible plan for a rural region can also be the starting point for a coherent city plan.

AN ACCESS-DRIVEN APPROACH TO SPATIAL ORGANISATION

The issue of spatial organisation is essentially about establishing desirable relationships. In terms of larger scale planning, the most fundamental relationships are those between the three basic landscapes of society (primeval or wilderness, productive rural and urban landscapes) as well as between the elements making up those landscapes. Access to all of these should be regarded as a basic right of all human beings. The challenge, therefore, is to create enduring relationships between all of these in such a way that each complements the others.

The key to this challenge, in turn, is to establish a powerful geometry of zonality, driven by the concept of access. To explore this further, it is useful to discuss relationships relating to the green system and the built system (the capital web of investment) separately, before drawing them together.

'The green system'

The term 'the green system' is used here to include both primeval and productive rural landscapes. The starting point for determining a logic of zonality is identifying where human influence should be minimized: identifying the primeval landscapes that should be retained. A number of factors may influence this decision: uniqueness, pristine natural condition, ecological sensitivity or beauty.

A central realisation, however, is that this process of identification cannot be mechanistic: it is not simply informed by earth or biological sciences. It is profoundly influenced by concerns of place: retaining for future generations the elements that make particular landscapes unique (Norberg-Shulz, 1980:7). It is also informed by historical interactions particularly the identification of sacred places. Alexander *et al.* (1977:167) correctly argue that sacred places should be defined broadly, to include any special places that have come to symbolise an area and people's roots there – places of natural beauty, functional significance (such as springs or

indigenous forests) or historic landmarks left by past ages.

Issues of access also inform the determination. These primeval areas need to be spread across the region to ensure equitable access. This concern has scalar dimensions and the concept of primeval conservation is a strongly hierarchical one. Lyle (1985:102), for example, advocates a hierarchy of different habitats (places where the full range of requirements of a particular species are met). These are:

- Wild areas: large areas not radically altered by human use, providing for a full range of regional species, such as national parks.
- Wild patches: usually measured in square miles, large enough to be self-maintaining systems and as ecologically complete as any area can be without top predators.
- Wild enclaves: not large enough to be self-sustaining systems (with incomplete ecological feedback loops) but still able to support significant wildlife populations.
- Exotic greens and wildlife parks: small-scale systems, often in urban parks.

These hierarchical spaces create a system of green, outdoor 'rooms'.

A second central concept is that of wild corridors. In order to promote biodiversity, habitat selection and species migration, the system of primeval rooms should be linked, thus creating a web or network of rooms and corridors.

Finally, these primeval areas should be buffered. The appropriate form of buffering is agricultural land along a continuum ranging from more extensive to more intensive agriculture, with more extensive activity buffering the primeval land. This is not only a protective device but also accords with the theory of the land market and the theory of place. Alexander *et al.* (1977:15), for example, argue that people cannot maintain their spiritual roots and their connections to the past if the physical world they live in does not sustain these roots. Thus the best way to celebrate a sacred site at any scale or place is through a progression of spaces that gradually intensify and converge on the inner sanctum – a series of nested precincts.

The built system

From a built perspective, the central issue is equitable access to public facilities and services. Conventional approaches to public investment in peripheral areas have tended to focus on existing agglomerated areas or nodes. These approaches do have some applicability, particularly in areas that already have an established urban hierarchy and where rural densities and incomes (and thus thresholds) are relatively high (Dewar, 1985:27).

However, the problem with this approach within a scattered uncoordinated pattern of settlement is that each agglomeration is seen as an 'introverted' problem: it must seek to break out of a spiral of poverty using its own existing limited resources and weak local markets, sometimes supplemented by a small, once-off inception of public finance. In this system, the spatial pattern of public investment is scattered and new investment does not reinforce or build on other public investment. Commonly, too, decisions about particular forms of projects (for example, clinics) are taken in isolation from other forms (such as schools).

An alternative way of thinking focuses on line (the transport routes which tie a number of agglomerated nodes together), as opposed to points or nodes as the logical focus of an ordered strategy of rural investment. In effect these routes should be seen as 'activity or investment lines': the issue of structure becomes the articulation of rhythms of public transportation and those of the public elements, which generate interaction in rural areas. (Dewar, 1984:11).

This way of thinking can be illustrated through a sequence of diagrams.

The issue of improving access to public facilities and services involves considerations both of taking people to services and services to people. The initial action is creating a surfaced route (thereby allowing buses and taxis to move freely), tying a number of incipient settlement agglomerations together (*Figure 1*).

Public transportation is as important in these rural areas as it is in cities. Space is now differentiated: people living near a route are more accessible than those living further from it. The action immediately leads to subtle processes of intensification along the route.

There are two main reasons for this. One is that access to public transportation immediately and significantly increases people's choices and their ability to access regional opportunities over a much broader area. The other is that the route represents, economically, the first point of exposure to a broader market: it creates the opportunity to turn small surpluses (whether agricultural or manufactured) into cash.

The route also suggests a pattern for the provision of bulk line services. It is

Figure 1: Creating a surfaces route by tying incipient settlement agglomerations

Figure 2: A pattern for the provision of bulk line services

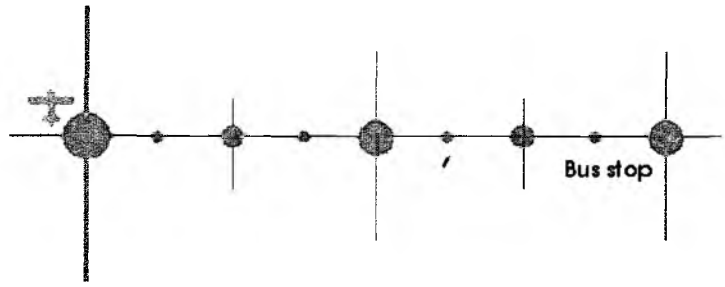

Figure 3: A hierarchical system od points of higher accessibility

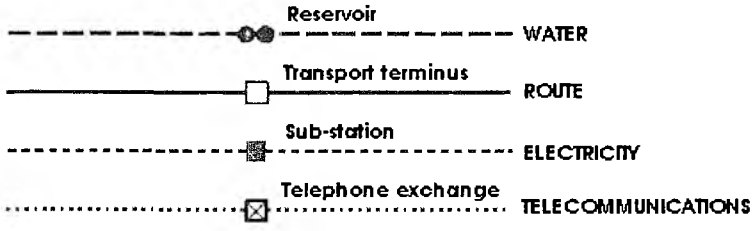

Figure 4: The relationship between point and line public services

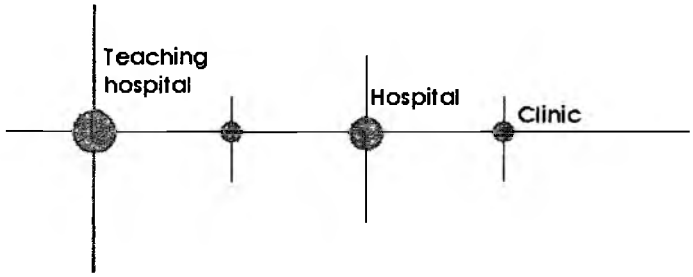

Figure 5: The relationship between point and line public services

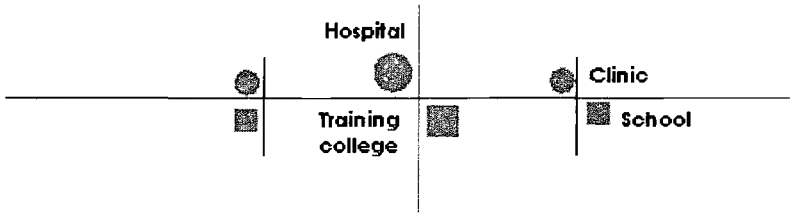

Figure 6: 'One stop shopping' and this itself significantly promotes ease of access

The route also suggests a pattern for the provision of bulk line services. It is clearly sensible to coordinate these, for a network of facilities yields more opportunities than if they are uncoordinated (for example, water and electricity sets up possibilities for forms of economic activity which are not possible if water is provided in isolation) (*Figure 2*). This seemingly obvious point is frequently forgotten in public investment programmes.

However, space along the route is not equally differentiated. In places, the route meets other routes and transportation stops make certain points more accessible than others. A hierarchical system of points of higher accessibility therefore emerges along the line (*Figure 3*).

This suggests a relationship between point and line public services (*Figures 4 & 5*).

The consistent hierarchical principle is that the higher order facilities seek a relationship with the highest points of accessibility (for in this way they serve the largest area) and lower order levels of facilities find their own equivalent level of access.

Further, different social facilities appropriately should seek a relationship with other facilities. The principle of clustering (as opposed to scattering) facilities is of fundamental importance for it promotes 'one stop shopping' and this itself significantly promotes ease of access (*Figure 6*).

It should be noted that this does not equate to the conventional approach that concentrates on nodal settlement. The emphasis is upon public spending, and the public challenge involves making this investment as accessible as possible. The process of action and reaction is a continuous one, in which activities (public and other investment) take positions relative to each other within an essentially linear system.

Over time, the settlement pattern adjusts itself as people seek locations according to their relative need for access (*Figures 7 & 8*). This can be seen in many cases across the South African landscape (Dewar, 1985:32).

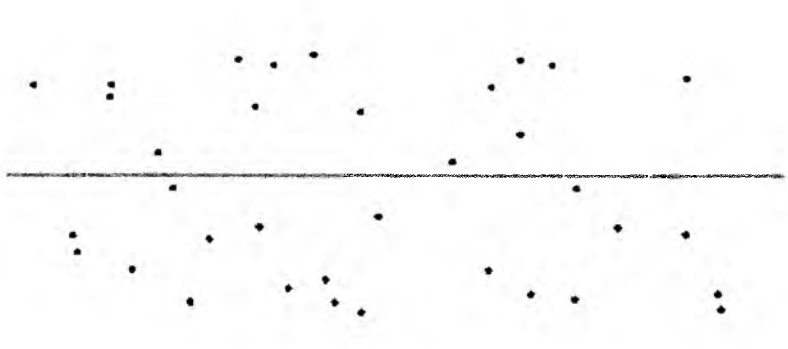

Figure 7: Settlement patterns according to need for access

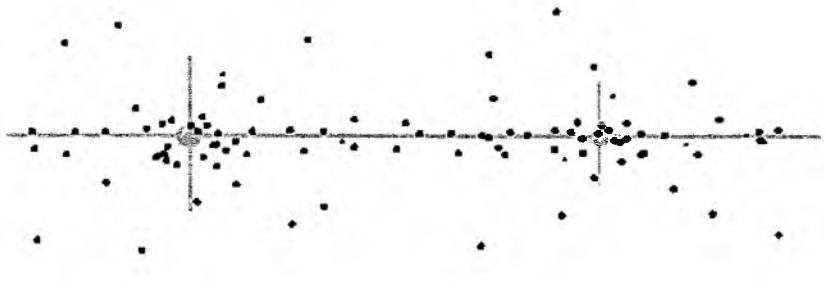

Figure 8: Settlement patterns according to need for access

The pattern also sends out clear locational signals to both large and small economic activities. The settlement concentrations provide a market for small traders and manufacturers as well as for small farmers; agricultural activity tends to intensify closer to the market, consistent with the operation of the land market.

Increasingly, therefore, local needs are met locally and increasing densities along the line make public transportation more efficient, frequent and viable. People's choices are improved.

A further caution is that this way of thinking does not equate with the transportation-engineering concept of 'regional corridors' advanced in some quarters in South Africa to promote regional economic development. Rather, it recognises that embryonic urban corridors do not neatly equate with routes. They have a necessary thickness of intensification, regionally and locally, which promotes economic diversification in the longer term.

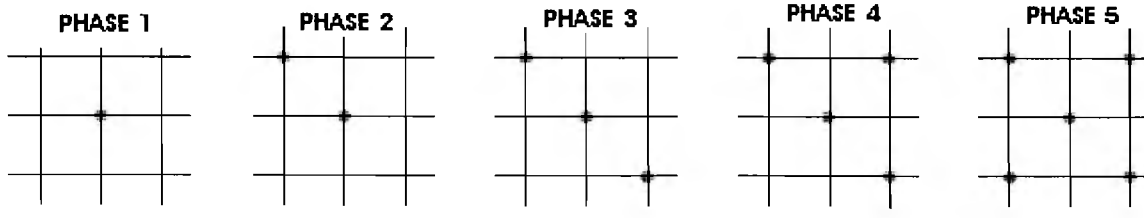

Figure 9: Priorities over larger space and time: hospital provision over the entire region

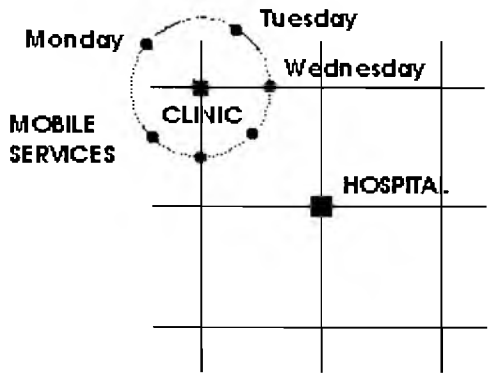

Figure 10: Each hierarchical level of services provided support lower levels, e.g. health services

This way of thinking also assists decision-makers to think about priorities over larger space and time frames. Take an example of hospital provision over the entire region (*Figure 9*). The principle employed here is using each tranche of investment to serve the largest number of people: it is the principle of closing down space over time, to achieve ever-increasing levels of choice and convenience.

There is an important dimension of vertical integration associated with this approach. The principle is that each hierarchical level of services provides support to lower levels. This is illustrated below through the example of health services (*Figure 10*).

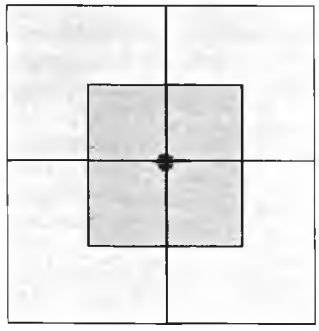

Figure 11: Intersection of two linear systems: urban and agricultural components encircled by primeval components

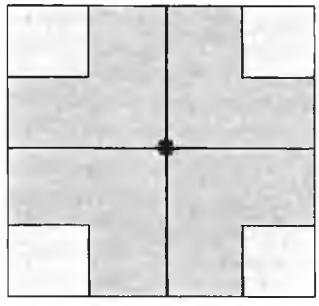

Figure 12. The opposite extreme: urban and agricultural concerns override primeval element at four places on route

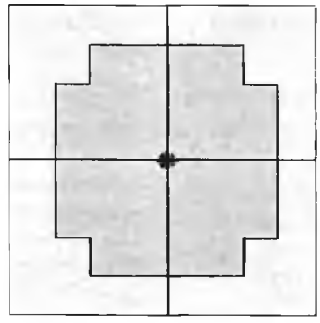

Figure 13: Conceptually represents the optimal set of relationships in undifferentiated landscapes

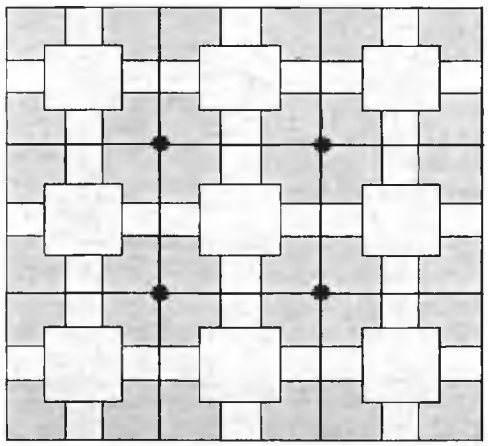

Figure 14: The optimal set of relations: the emerging regional landscape when this way of thinking is extended

clearly sensible to coordinate these.

Over time, with increasing intensification, parts of this regional system of settlement become more complex and urban; the structural system then breaks away from the regional route to establish its own more complex logic while building on and reinforcing the original pattern. Significantly, around this time it may be necessary to downgrade the original regional route to become an urban street – its urban structural function becomes more important than its movement function.

Integrating the green and built systems

Figures 11-13 show alternative ways of bringing the green and the built systems into alignment. In *figure 11*, the intersection of the two linear systems results in the urban and agricultural components being encircled by the primeval component. In this case, the intersection results in ecological tenets overriding the tenets of the linear settlement with its agricultural linkage. The basic configuration of the primeval element only is conserved.

Figure 12 is the opposite extreme in which urban and agricultural concerns override the primeval element at four places along the route.

Figure 13 shows the affect of linking primeval rooms with wild corridors. The set of spatial relationships is now consistent with ecological tenets and also respects the integrity of the urban and agricultural systems: the primeval component establishes a grid of nodes and corridors that, structurally, is the photo-reversal of the linear-nodal configuration of the routes. Conceptually, this represents the optimal set of relationships in undifferentiated landscapes.

Figure 14 shows the emerging regional landscape when this way of thinking is extended.

Finally, when other levels in the hierarchy of green and built systems are added, a still more complex pattern emerges around the same principle.

PROTECTING AND ENHANCING ACCESS: SOME ASPATIAL DIMENSIONS

It has been emphasised that the central concerns underpinning plan formation are creating choice and maximising access to opportunity. Some spatial implications of these concerns have been discussed. However, the concept of access is far more than simply spatial. Processes of urban transition are frequently highly competitive and there is an on-going danger that the poorest and most vulnerable members of society are disadvantaged, frequently with devastating consequences. For them, critical choices may be removed, unless they are consciously protected and enhanced. This protection requires specific policy attention in the process of plan formation and has implications both for organisation and the nature and form of public investment. There are three dimensions of this which are particularly important in developing contexts.

Promoting a diverse socio-economy

Braudel (1981:27; 1984:89) observes that the economy of capitalist countries involves three circuits of capital that interact in complex ways: the non-market or subsistence economy; the market economy (the competitive sector comprising small or medium sized independent firms or manufacturing units); and the capitalist sector, that includes large corporations, multi and trans-national enterprises.

The urban transition involves profound economic change, driven by the economic motors of innovation, diversification and specialisation. These processes of change however are by no means even. There is a real danger, in particular, that these processes, increasingly influenced by growing globalisation, shut down opportunities for operations in vernacular subsistence or small market sectors. These are of considerable importance: small-scale operations are frequently embryonic and act as a safety cushion for the risky emergence of operations in larger market and capital activities.

It therefore becomes an overt planning task to make space for different economic activities or circuits and to ensure that the preconditions for all to exist are in place. This involves understanding the requirements of all actors within these. Actions may include:

- The creation of spatial preconditions (e.g. the construction of strategic local connector routes to expand markets; the creation of mechanisms (such as markets and manufacturing hives) to ensure that small enterprises can operate in really viable locations with very low overheads) (Dewar & Todeschini, 1999:89)
- Different forms of resource evaluation (for example, identifying and protecting local resources which may not have market value for larger market-driven circuits, but which are central to the survival chances of operators in the subsistence economy) (Kiepiel & Quinlan, 2000:31)
- Differing land tenure arrangements to allow for choice
- Different technological and infra-structural requirements (such as rain tanks to capture roof run-off and other forms of small scale water capture and the recycling of grey water)
- Ensuring access to markets under conditions of small and erratic surpluses (such as the organisation of periodic market circuits).

Clearly a number of these concerns have implications for spatial organisation as discussed above.

Promoting flexible, supplementary systems of service provision

It has been argued that, appropriately, bulk line services which require high levels of threshold support, should be located in association with the regional routes, which attract higher order social and economic services and increasingly intensifying populations. However, access to these services (such as potable water, electricity, land-line tele-communications) drop rapidly away from the route.

Three factors complicate the provision of services in transitional areas (for example, potable water, energy, sewage disposal, and storm water management): levels of poverty are high; densities (and thus thresholds) are low; and population trends are never certain. It follows that in assessing options for service provision, simple direct cost comparisons are usually misleading: technology with the lowest capital cost is not necessarily that of highest net economic return and no one technology is best suited to all needs. A range of factors (for example, sensitivity to the local resource base, sensitivity to the range of incomes; the nature of, and sensitivity to, a range of settlement densities necessary for technical or economic viability; the nature and extent of potential spin-offs; the scale of recurrent operational and maintenance costs) needs to be assessed in considering options to be offered.

In most circumstances, however, the imposition of a single form of service provision, regardless of its nature, will negatively affect on large numbers of people. The most sensible approach is to provide a range of supplementary options, that give people the choice to opt-in or opt-out of particular technological options. An essential part of the package, however, must include 'soft' technologies with environmental benefits and very low operating costs (for example, solar panels, rainwater tanks). For many people the most accessible (in some cases, the only), and hence most basic, option is one modelled on traditional institutional arrangements – communal tenure is accompanied by a stream of benefits involving free access (for example, free access to existing water and fuel systems) (Lyne & Nieuwoudt, 1991:25).

It follows that the lowest entry to services should be provided with little or no operating or maintenance costs. This not only implies active conservation of natural resources (for example, indigenous fuel-wood) but the use of 'soft' technologies with minor running costs (for example, solar energy, bore hole water supply). Failure to do this will inevitably lead to escalating poverty, on-going subsidisation and payment defaults, creating a region of escalating debt.

Promoting more complex institutional arrangements

A characteristic of transitional processes is that they frequently tend to be accompanied by the reduction of existing institutional structures into standardised forms.

Again, traditional structures are frequently the victims of this, often with very negative consequences developmentally. This tendency needs to be strongly resisted. Two dimensions of this are particularly important.

The one is recognising the role of traditional community structures in the management of the urbanisation process: for example, community control over land allocation (Cross, 1994:87). While this calls for partnerships between formal bureaucratic and informal traditional management, particularly around issues of city-wide significance, it also recognises that building the city is largely an informal and traditional process – there must be the confidence to allow sufficient freedom for this to occur.

The other is that diverse lifestyles and livelihoods in the urban region cannot be sustained under a single form of land tenure – there is no one correct form of tenure and all have merits and limitations (Rollnick, 2003:47). Consequently, tenure arrangements should comprise a package of measures: within a dominant system of communal ownership of land, it may be necessary to create an active land market in certain areas to encourage commercial activity and this market may take different forms (for example, a rental market for agricultural land (Lyne & Niewoudt, 1991:24), ownership in central more commercial locations or in anchor areas of eco-tourism).

CONCLUSION

Regional transitional areas around larger urban systems represent a particular and difficult management challenge. This paper has sought to advance an approach to planning, based on a number of integrative concepts, drawn from different disciplinary fields, which may be successful in meeting that challenge.

While the paper has considered qualities of undifferentiated space, it does no deny the importance of the planning context (Dewar *et al.*, 1986:34). Of necessity, it has only identified and integrated some principles of spatial organisation that underpin appropriate regional plans. Sensitively applied to the cultural and natural landscape, they promote the emergence of 'timeless qualities' of the region.

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