Towards Contemporary Sustainable Settlement Planning: Some Reflections on the 'Nature of an Appropriate and Resilient Spatial Plan' for South African Cities[1]

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ABSTRACT

Foucault once suggested that the study of social phenomena in pathological societies sometimes reveals clearly what is elsewhere less obvious. The paper is about an instance of such raw instrumentality from the African southern tip and global edge, reflecting on the main features of the evolution of physical settlement planning thought and practice at the *Cape of Good Hope*, also known as the *Cape of Storms*.

Analysis of the historical development of Cape Town has suggested that a number of settlement-making paradigms were operative during the respective periods: the pre-colonial; the earlier (1600s-1840s) and later colonial (1840s-1920s); and the 'modern town planning' (±1930s-to the present). In recent times there have been numerous calls for a shift away from the mechanistic, reductionist and functionalist 'modern town planning' paradigm, which continues to be based on a programmatic land-use planning approach and which was appropriated by the operative apartheid ideology in South Africa for very many decades, leading to universally acknowledged pathological societal and settlement actualities that endure.[2] Paradoxically, transformation and physical change appear more arduous to achieve than political change. For nearly two decades the 'New South Africa' has been democratic, yet modern town planning remains the dominant 'mindset'. It is an approach that has shown itself to be neither resilient nor capable of dealing effectively with many realities entrenched in the physical structure of settlement, some characteristics of which continue to be propagated in newer and even current developments. This contributes to increasing inequality, high formal unemployment, poverty, informality, uncertainty and trauma, whether local, regional or global in origin. Generally, with city planners, engineers and bureaucrats actually in charge, each operating within their professional 'silo' and their own discourses, very poor livability and urban design results in practice. There is neither common professional agreement about what the qualitative settlement aims should be nor how the organization of space should make appropriate contributions.

The paper rests on the premise that closer examination of some of the attributes of earlier colonial models of settlement-making is of relevance to the quest for some valid principles for the more equitable and resilient physical structuring of settlements at the current time. Selective evidence is marshaled in this regard from the 1800's at the Cape.

On the evidence of two town extensions located to either side of Cape Town (the Newmarket to the east and Green and Sea Point to the west) dating from the 1800's, the paper suggests that the physical order of structure as well as the dynamic nature of the sporadic unfolding, development infill and redevelopment that have occurred as part of the development processes exhibited, do appear to hold lessons for resilient town building in our time. Attention is also drawn to parallels between features of the historic practices of settlement-making briefly examined in the paper and ideas about the making of the city expressed in the 1950's-60s and more recently by urban design pioneers, critics and planners, such as Louis Khan, David Crane, Romaldo Giurgola, Jane Jacobs, Christopher Alexander, John Habraken, Jan Ghel and Ananya Roy.

Basic constituents of an appropriate approach to the problem of settlement-making in South Africa and some of the most important elements of a minimalist urban structural and spatial order are suggested in conclusion.

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[1] Material from a paper published nearly 20 years ago in Pretoria is here included: see Todeschini, F., 1995. An earlier version of this paper, appearing under a somewhat different title, was presented at the Joint AESOP/ACSP Congress during July: see Todeschini, F., 2013.

[2] The crime of apartheid is defined by the "2002 Rome Statute of the International Criminal Court as inhumane acts of a character similar to other crimes against humanity 'committed in the context of an institutionalized regime of systematic oppression and domination by one racial group over any other racial group or groups and committed with the intention of maintaining that regime'," http://en.wikipedia.org/wiki/Crime_of_apartheid (accessed 6th May 2013). The apartheid Nationalist government policy endured over the period 1948 to 1994.

1 INTRODUCTION

With an area of over 2,400 square Kilometers, currently metropolitan Cape Town has a population in excess of 3.7 million and, typical of cities of the global South, it is growing relatively rapidly.[3] The setting is splendid, yet there is very significant inequality, increasing poverty as well as economic and settlement informality,[4] with the ever greater deployment of survivalist strategies on the part of the many economically and spatially marginalized. The separation of land use functions (those of 'live', 'work', 'play' and 'move'),[5] in combination with the spatial legacy of apartheid, of an increasingly geographically eccentric (yet politically- and economically-entrenched Cape Town city centre), and the imposition of a large-scale limited access highway grid for vehicular mobility since the 1950's, have produced a settlement reality characterized by separation, fragmentation, sprawl, long trip-lengths[6] and low average densities, with the majority of the poor residing in areas far from places of economic opportunity.[7] The suburban model, Garden City derived, has been, and remains the major informant, perversely even within current national housing programs for the poor.[8] Inevitably, there is inadequate and expensive public transportation and excessive private vehicular travel on limited access, high-speed mobility highways that constitute the very physical barriers and 'fences' to vast areas that have become dormitory poverty-traps for the majority of the metropolitan population. Overall, the settlement system performs poorly for most and is unsustainable. While, at least in part, these outcomes are recognized in current town planning thought at national,[9] provincial and even at some local government levels, it is debatable if the currently adopted metropolitan Integrated Development Plan (IDP), Spatial Development Framework (SDF), District Plans, the recently revised Zoning Scheme for the City of Cape Town (when considered together with other legal instruments and strictures that apply), are so framed as to be able to provide appropriate settlement-making guidance and ensure targeted public investment in infrastructure and social facilities top-down, yet harness the energies of the many poor and marginalized, bottom-up.

Figure 1: Le Corbusier's Diagram of 1930: see Le Corbusier, 1930.
"We must kill the corridor-street"

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[3] Population growth is in the order of 3% per annum. As elsewhere in the 'Global South', 'slums' are widespread, yet government (and even UN Habitat) policy tends to be directed at their prevention and eradication: only recently has policy been adopted that acknowledges their existence and is aimed at their upgrading.

[4] Unemployment is currently of the order of 25-27%, equal to the worst being experienced in Europe (such as in Greece and Spain), partly occasioned by global competition that has, for example, forced contraction in some traditionally significant economic sectors, such as clothing manufacture and the fishing industry.

[5] See: Le Corbusier, 1930; and Conrads, U., 1964 (CIAM Athens Charter).

[6] Despite the entirely different socio-economic realities that respectively pertain, the average home to work trip length of over 16 Kilometers in Cape Town is about the same as that of Los Angeles!

[7] The average gross density is currently about a third of what it was a century ago: approximately 36 people/Ha, although levels of over-crowding in both formal townships and informal settlements are very substantial. As a further comparison, the average dwelling unit density of Cape Town is currently 1/5th to 1/7th of the density that prevails in the old central walled city of Ahmedabad, India!

[8] For some years now, the 'Ministry of Human Settlements' has replaced what was previously known as the 'Department of National Housing'. Arguably, there has been very little substantive policy change, however: the emphasis remains on a subsidy system leading to the quantitative construction of individual, separate, small, pavilion-like single dwellings, on ever-smaller plots, further and further at the edge of the metropolitan area.

[9] See, for example, the National Planning Commission, 2011, particularly Chapter 8: Human Settlements.

In short, the dominant operative planning paradigm in South Africa is questionable at many levels. Conceptually, the spatial structure of the City of Cape Town, as well as the operative/permitted land uses by the over-arching and controlling zoning scheme, are both based on the 'modern town planning', functionalist, International Congress of Modern Architecture (CIAM) 'Athens Charter' of 1933 and on the earlier dictum of Le Corbusier "*il faux tuer la rue-corridor*" ("we must kill the corridor-street") (figure 1).[10] The informing paradigm continues to be mechanistic and, in practice, pre-defines and spatially separates functionalist end-states, top-down, yet, and paradoxically, in actuality development is largely private-developer led;[11] arguably, the system seeks to control far too much, with the result that the overall plan and the formal development that occurs are neither particularly resilient, nor sufficiently inventive, and yet the system generates massive continuing management costs.[12] The macro-morphology is actually set in place by transportation engineers. Moreover, the approach neither engages with the endemic poverty that exists nor facilitates small-scale bottom-up development, although it is impossible for the formal economy to absorb the majority of new job seekers that are mostly unskilled.[13] As a consequence, the informal economy and informal settlements are growing significantly, helter-skelter, and the energy that they embody is not properly developmentally harnessed.

In the circumstances, the paper seeks to make some contribution to the necessary planning and design debates at a conceptual level, insofar as they relate to the search for the 'appropriate nature of a resilient plan'. It does so by telling a 'story' and suggesting that we do not need to invent a new paradigm: rather, we should rehabilitate some principles and practices that were endemic to operative settlement-making prior to the deployment of 'modern town planning' at the Cape and we should formulate a suitably hybridized way forward. With the benefit of hindsight we can see clearly that the modernist movement, with all its heroic bombast, threw the 'baby out with the bath-water' as regards settlement-making for a society that is generally poor, has limited resources and needs to renew itself.

Figure 2: City of Cape Town Spatial Development Framework.[14]

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[10] See Le Corbusier, 1930; and Conrads, U., 1964 (CIAM's Athens Charter of 1933).
[11] For decades, much development of the city has resulted from large-scale private development applications that involve rezoning to permit the development: for example, the Victoria and Albert Waterfront, Century City and the current 'WesCape' proposal for a satellite city situated beyond the urban edge, to the north, which the Cape Town City Council has approved in principle, but the matter is on appeal at Provincial MEC level.
[12] The City of Cape Town employs far more city planning and related personnel than does New York City, despite the fact that the latter has a population about twice that of Cape Town.
[13] Indeed, it may be argued that the gap between the operative planning rhetoric and the practices in place appears to be growing, rather than narrowing.
[14] Courtesy of the City of Cape Town's official planning portal (accessed 15 May 2013).

Figures 2 to 4 reflect aspects of the current spatial reality and mode of planning, including 'emergency temporary housing' in regimented ranks appearing in the left-bottom portion of figure 3 and much informal shelter adjacent to highways, as shown in figure 4.

Figure 3: GoogleEarth View of a Portion of Delft, a Typical Recent Dormitory Suburb in the South-East of Metropolitan Cape Town.

Figure 4: GoogleEarth View of a Portion of Khayelitsha, a Typical Recent Dormitory Suburb in the South-East of Metropolitan Cape Town.
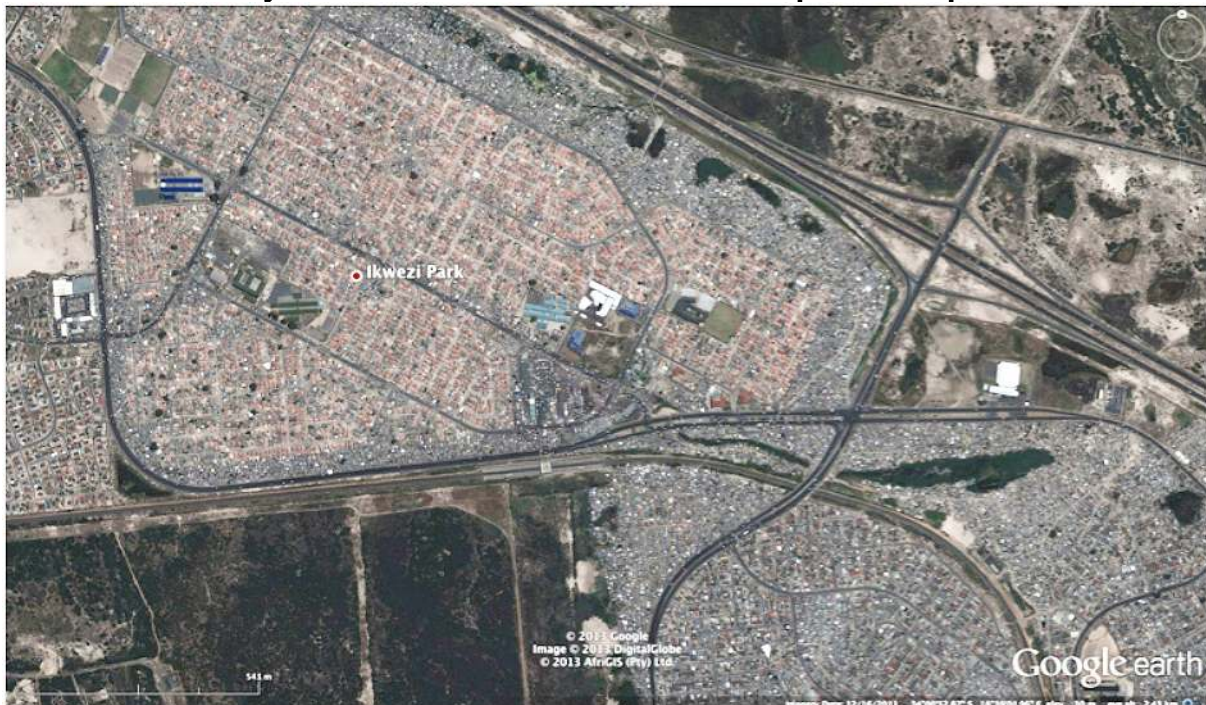
Research of the historical development of Cape Town has suggested that three planning paradigms have featured in the development of the settlement, besides those that may have obtained in pre-colonial times under the indigenous Khoisan. The first two—earlier colonial, operative until about the 1840s, and later colonial, spanning from approximately the 1840s to

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the 1920s-1930s—were the products of Dutch and English colonial occupation. They share a number of features but are also different in important respects. In combination, they shaped the form of Cape Town right up to the first decades of the 20th century.[15] The third paradigm is that of 'modern town planning'. All these paradigms were derived from mainstream western European and North American practices of city building and were applied in this far-away place, situated at an edge of the global South.

The premise on which the paper rests is that an understanding of certain aspects of the two earlier models that helped to create the enduring elements of the public realm of the positively operative portions of Cape Town is relevant to our considerations, as we seek to chart a way forward. Moreover, there is the suggestion that there are strong coincidences between central components of these earlier town-building models and a number of seminal observations by some few city planning, urban design and architectural scholars, practitioners and critics during the 1950's-60s and later: in particular Louis Khan's idea of the 'Street as a fundamental Societal Institution', the ideas of the 'Dynamic City' and of the 'Partial Vision', respectively proposed by David Crane and Romaldo Giurgola;[16] various critiques and representations relating to city planning and urban design by the journalist/urbanist Jane Jacobs;[17] observations about the semi-lattice and open morphology of natural cities, as opposed to the tree-like and closed structure of artificial ones, advanced by Christopher Alexander;[18] considerations of life in the public spaces between buildings by Jan Ghel;[19] reflections on urban structure and morphology by John Habraken;[20] and discussions on informality by Ananya Roy, amongst others.[21]

The rest of the paper is organized as follows. Section 2 introduces the mentioned 'story' and the main features of early colonial settlement morphology at the Cape and concludes with the specific example of the explicitly planned 'Newmarket' eastwards extension to Cape Town, undertaken in the teens of the 1800's. Section 3 presents material relative to the gradual, and generally 'unplanned', laissez-faire urban extension and development of Green Point and Sea Point, to the north-west of central Cape Town, which was to become a significant urban corridor and commuter suburb on the Atlantic coast. Section 4 draws some of the pertinent threads together in the form of a conclusion.

2 THE EARLY 1800'S AND THE 'NEWMARKET' TOWN EXTENSION

With a population of only about 14,000 as the 1800's approached, the overall physical structure of Cape Town was illustrated on a great number of maps: for our purposes, one by Louis Michel Thibault and others of 1791 is particularly useful (figure 5).[22] A number of characteristics of the settlement as a whole are noteworthy, as follows:

• settlement was compact and the outer edges were clearly defined;[23]

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[15] The Dutch occupation of the Cape spanned from 1652 to 1806, interrupted only by a brief intervening first British occupation (1795-1803). Formally approved by the House of Orange in 1814, the second English colonial occupation endured until 1909, when South Africa received National independence. The periods during which the suggested paradigms appear to have been operative were somewhat longer than the actual respective colonial occupations. This is because entrenched practices of town building tended to continue for some time even under the changed authority.
[16] Crane 1960a, b and c, as well as 1964; and Giurgola 1965.
[17] Besides her own well-known works, see: Lawrence 2006, about her activism through the Rockefeller Foundation Urban Design initiatives of the 1950's.
[18] Alexander 1966.
[19] Ghel 1971.
[20] Habraken 1982.
[21] Roy 2005.
[22] Many other maps of Cape Town by Thibault and others are also notable, Cape Archives M1/997, for example.
[23] Not surprisingly, the names of a number of the routes at the edge of the settlement included the term Buiten— as in Buitengraght, Buitenkant, Buitensingle—Buiten in Dutch meaning outer.

- the plan form was that of a grid of public streets defining private building lots and central public spaces, main axes in the grid relating to major features of the surrounding setting, as well as to some high-order internal elements, such as the Company Gardens;[24]
- the main public elements, such as the Castle and Grand Parade, the Company Gardens, Greenmarket Square, Church Square, Boeren Plein (Van Riebeek Square of today), and a variety of other public spaces and buildings, were strategically located and they helped to organize the overall public spatial structure of the town. They were built as part of conscious acts of place-making. Public buildings were the foreground structures (the pivotal and unique buildings) of the settlement;

Figure 5: Barbier, Van der Graaf and Thibault Map of Cape Town 1791.

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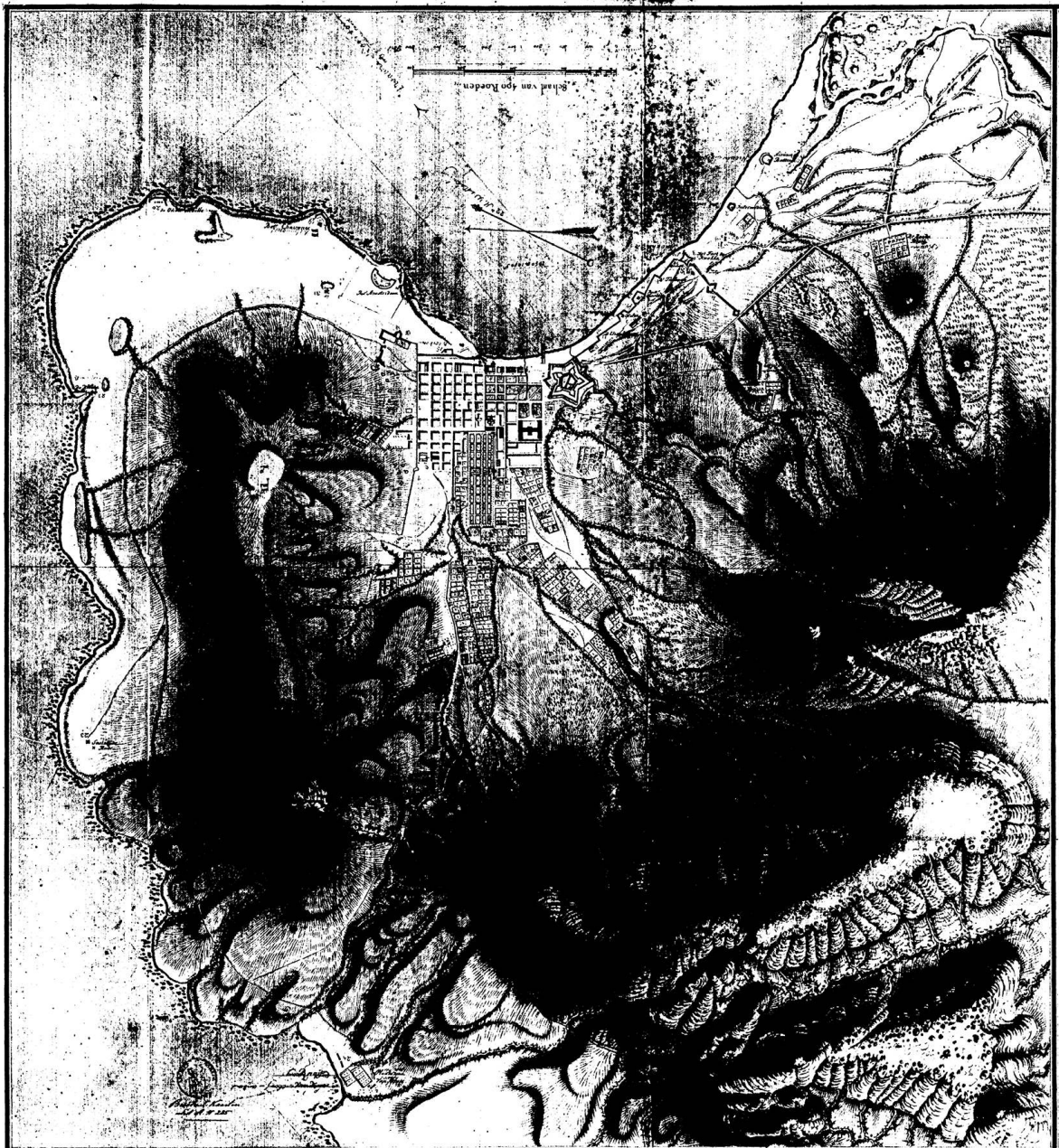
[24] This form was in widespread colonial use, even in the Puritan villages of North America: see Foglesong, 1986. It is notable that the layout of farmsteads often replicated the checkerboard pattern characteristic of Cape Town. Carefully squared-off fields for cultivation and pasture mimicked the general plan of the town, and avenues on the axes of homesteads provided the base lines and focal points for humanized and tamed landscapes, in a setting where nature predominated.

- essential utilities, such as fountains for drinking water, were provided for in the major public spaces and squares;
- with few exceptions, the town 'blocks' were approximately square,[25] and were occupied by the dwellings of the majority of the inhabitants, which constituted the 'infill'. The dwellings were therefore the background structures (the ordinary buildings) on the streets and squares that they spatially defined. With few exceptions, they remained modest in their size and the way they presented themselves, in contrast to the foreground structures already mentioned;
- the spatial structure of activities was determined by the Governor in Council and the strictures of the monopolistic Dutch East India Company (DEIC), which attempted to exert control over all economic activity;[26]

As may be ascertained from a variety of illustrations of the settlement at the time, some characteristics of individual buildings were also noteworthy:

- in addition to some DEIC structures, such as the hospital and barracks, buildings for institutional and public functions were the buildings with the largest mass, and included most of the prominent and unique buildings in town;[27]
- the dwelling houses was generally of a standard type which abutted the street directly and weres often modulated by means of an intervening stoep. Though individually elaborated and occasionally distinctive—particularly when prominently situated on corner or other significant sites in town—dwellings were generally more ordinary than company or public buildings;[28]
- because of problems with fire, and the need to allow for independent construction on each site, dwellings were separated on plan by an intervening minimum space (though they remained close enough together for them not to be read as pavilion structures). With time and the shift from thatched to parapetted roofs, buildings were set closer together and in many instances were erected contiguous to each other as row-houses.[29]

Both the physical layout of the settlement and the processes of development that put them in place were informed by a clear underlying conception that allowed for relatively natural evolution. The plan was not concerned with every aspect of physical layout. The primary purpose of the planning undertaken was the spatial organization of an overall framework in terms of which the most important elements were located. At best, the framework suggested a generic pattern for the most common buildings, such as dwellings, as a consequence of the specific dimensions of the town blocks and the way in which they could be subdivided into individual properties.

The monopoly trading interests of the DEIC were paramount considerations in the spatial patterning of uses. Consequently, buildings accommodating company institutions and

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[25] They were the equivalent of the Insulae in classical Roman colonial town planning, and featured in the Bastides established in England, Wales, and France during the first half of the thirteenth century, Spanish Pobliaciones and Zahringer towns in the vicinity of the Rhine, and Terre Murate founded by the Florentine Republic at strategic positions at the outer extremities of its dominions in the last decades of the 1300s. Colonial towns in the Americas were extensively ordered on the basis of such city blocks.

[26] As a consequence, no shop was permitted in the settlement, though informal exchange was commonplace. With the demise of the DEIC, private merchants flourished and taverns and a range of establishments catering to the recreational needs of large numbers of sailors were accommodated in the town.

[27] The Barracks near the Castle, with facades designed by Thibault, were the most palatial structure at the Cape in the early 1800s, reputedly constituting the largest building in the Southern Hemisphere at the time.

[28] Initially most dwellings were single storey with a *solder*—the roof space was sometimes separate from the living spaces below and was used for storage.

[29] The inflammability of thatched roofs was a problem, and a relatively flat roof of trampled clay mixed with whale oil, supported by planks and timber rafters, was later developed. This mono-pitch roof form did not require the ridge-line and gable ends of thatched roof structures. It was commonly built sloping away from the front of the building, and a parapet thus became a feature on the street front. Such a roof was known as a 'Brak-dak.

operations featured prominently in these plans, but so did a system of regular streets and squares for public use.

The limitations imposed by the plans worked in tandem with other material constraints—such as the particularities of the site and the local climate, the restricted range and quality of building materials available and the mother country practices in undertaking communal provision for basic services like water supply and refuse disposal. Collectively, these constraints tended to result in a settlement that was formally coherent because of the clarity of the plan and the repetition of building forms.[30]

The historical record suggests that the geometry of settlement was sensibly related to the terrain, and helped to define a wide range of public and private places and sites. Though services such as the provision of drinking water, the removal of waste and the maintenance of public thoroughfares were primitive, the benefits of agglomeration were potentially accessible to most of the inhabitants, including slaves, since Cape Town was somewhat smaller in extent than a square Kilometer (940x993m), could be easily traversed on foot, and the disposition of activities and the physical fabric that housed them were relatively integrated.[31]

Because most people were poor, many activities occurred out-of-doors in appropriately demarcated public spaces rather than in the private dwellings: the street and the square were shared outside 'rooms'. Ordinary functions were carried out there, as were more occasional celebrations, protests, and other significant and symbolic manifestations of collective life.

The layout of sites for private use, and the minimal building development control to which they were subject, allowed for building and re-building over time, in progressively more durable and less hazardous materials, as well as in forms that tended to accentuate urban space continuity and the definition of public and private domains.[32]

The architectural vernacular reached very fine levels of resolution both in individual buildings and entire ensembles, as well as in the larger landscape components and site-making elements which became a feature of settlement at the Cape: avenues and baroque gardens; gateways, terraces and platforms, encircling 'werf-walls' and belts of trees; furrows and hedgerows; and public squares.

When the pressure for growth beyond the limits of the then existing bounds of the town was experienced in the late 1700's and early 1800's, it is not surprising that the planned 'Newmarket' extension was configured entirely in the terms of the prior model: street, square (in this case the extensive new market) and regimented town blocks, each scaled virtually exactly to those then existing in the old town.[33] Moreover, the entire extension was organized on the axis of the principal route connecting the town and the interior, just past the imposing presence of the Castle.

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[30] The historical record suggests that repetition did not mean that innovation was prevented.

[31] The poorer inhabitants tended to be spatially marginalized on the edges of town (near the waterfront, on the lower slopes of Signal Hill, and on the town-ward fringe of what was to become District Six), where the level of service provision was lower.

[32] Typically, the front rooms of an urban dwelling addressed the front stoep and the street. Narrow site frontages led to the development of L and U shaped house plans. Their internal yard was for the conduct of more private household and kitchen activities, while the front stoep, raised above the level of the street, was a form of living space from which town life and activities were observed. The Koopmans de Wet House on Strand Street is an extant example.

[33] The first town extension, starting in 1770's, was actually in the area that became known as the Bo-Kaap, situated on the lower slopes of Signal Hill. It is an interesting but different and more complicated story than that of the 'Newmarket' and, therefore, is not here included. See Todeschini and Japha 2004.

The earliest depiction of this extension to town that I am aware of dates from 1818, when the surveyor T G Elemans prepared a plan on the instructions of the Burgher Senate (figure 6).[34]

Figure 6: T G Elemans Plan for town extension, 1818.
It shows the 'Newmarket' town extension to the immediate east of the Castle.

Many decades were to pass before the 'Newmarket' town extension was filled-out by development, as evidenced by a number of D'Oyly illustrations from the 1830s, which show very few buildings in this area (figure 7), and the Snow's Survey of Cape Town of 1862 (figure 8). Close inspection of the latter shows that many of the town extension blocks defined on the Elemans plan were still to be built upon about 50 years later. In addition, Snow's survey reveals the presence of development just up-slope of the 'Newmarket' town extension into Kanaladorp (the later District Six), in a layout not in conformity with the pattern of the regular square town block which was so characteristic of earlier colonial settlement practices. This suggests that between 1818 and 1862 there was something of shift in the way that the overall organizing framework for town extensions was formulated. Aspects of this later colonial practice are explored in what follows.

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[34] The original Elemans plan, not in good condition and rather dark, is in the Cape Archives.

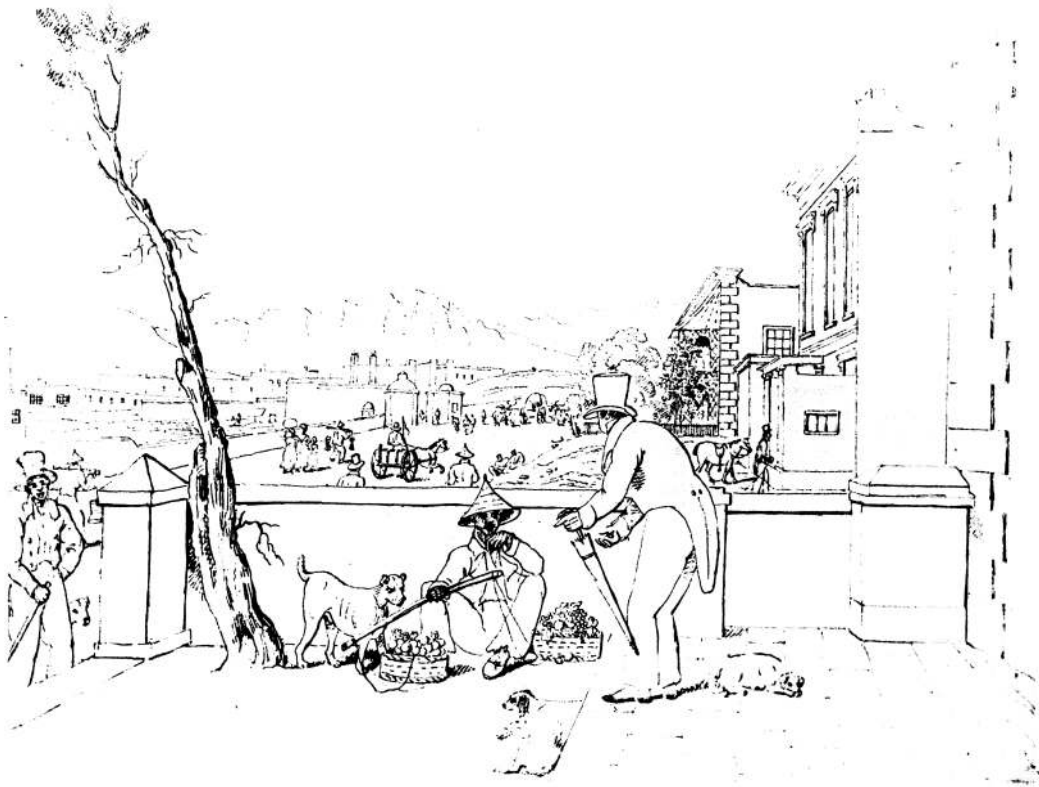**Figure 7: D'Oyly Illustration of the 'Newmarket.**

Figure 8: The 'Newmarket' and 'Kanaladorp' Portion of Snow's Survey of Cape Town, Green Point and Sea Point of 1862.

3 THE DEVELOPMENT OF GREEN POINT AND SEA POINT

We now turn to a town-extension that occurred at the opposite side of central Cape Town from the 'Newmarket': what became known as Green Point and Sea Point, to the west. It was also initiated in the teens of the 1800's, when the custom of conferring land grants on senior civil servants, not unknown in earlier colonial times, assumed new proportions.[35] Other 'Crown-Land' in the area was sold to a handful of individuals. Gradually and over the decades, without an overall preconceived plan yet with the active participation of many people, Green Point and Sea Point was transformed from relatively extensive wilderness and rather poor farmland into a veritable and fairly intense urban corridor, very well connected to central Cape Town.[36] The 'laissez-faire' approach became particularly manifest from about the mid-century. Figure 9 illustrates the evolution of the public access network, which progressed in parallel with the subdivision and suburban to urban development of the land.

Figure 9: The Evolution of the Public Access Network in Green Point and Sea Point over Time, till 1930.[37]

1770   1836   1862

1884   1902   1930

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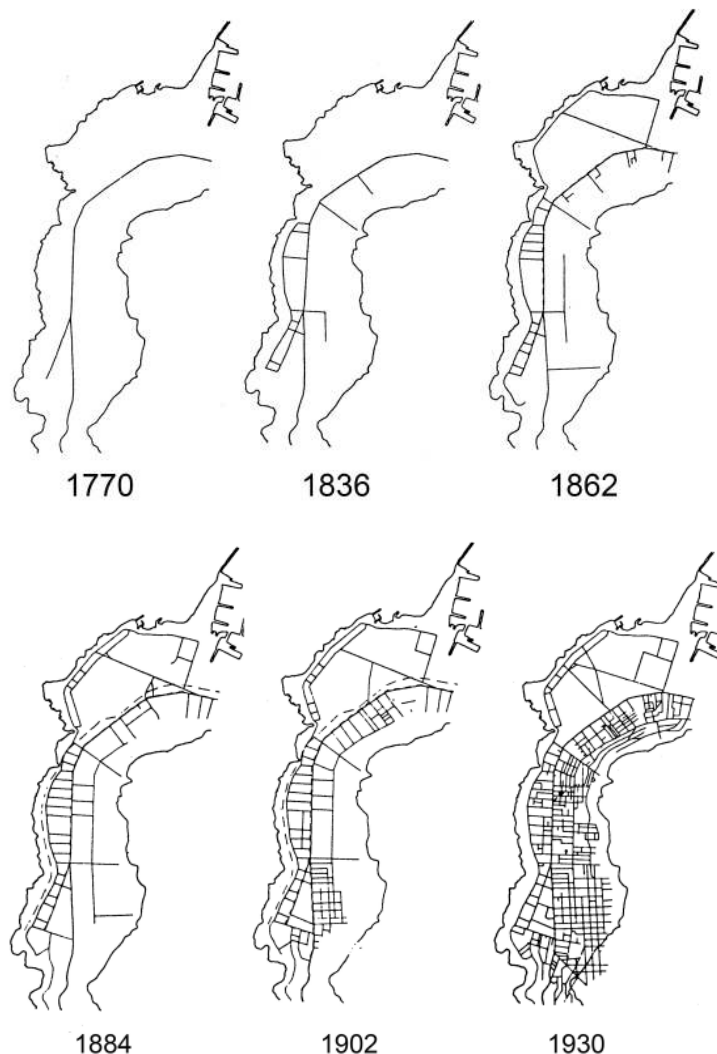
[35] For example: substantial land grants were made in Green Point and Sea Point to the Colonial Secretary, Henry Alexander, a relative of the Governor of the time—the Earl of Caledon. Indeed, in the early 1800's five individuals appear to have owned most of Green Point and Sea Point.

[36] North-west facing and with little water in summer, the general locale and the soil were poor for agricultural purposes. Reputedly, in the early 1800's there were far more ostriches than people there!

[37] The figure is based on research drawn from Todeschini and Japha, 1991. Unfortunately, the harbour profile shown for all dates in the figures that of today.

Constrained between the Atlantic shoreline and the upper steep slopes of Lion's Head and Signal Hill, with the extensive low-lying Green Point Common to the north, Green Point and Sea Point became a separate municipality served by competing and rather cheap tram and railway transport services provided by separate for-profit private companies. Figure 10 shows the central portion of the 1902 Green Point and Sea Point Survey, depicting the varied development served by the Main Road spine (the alignment of the tram service) and the railway commuter transport line along the Beachfront to the west. Residential developments ranged from grand villas to modest terrace- and row-housing. There were a number of public institutions such as churches, schools and the like, and there were commercial stores along the Main Road spine, many of which had apartments on upper floors (figure 11).

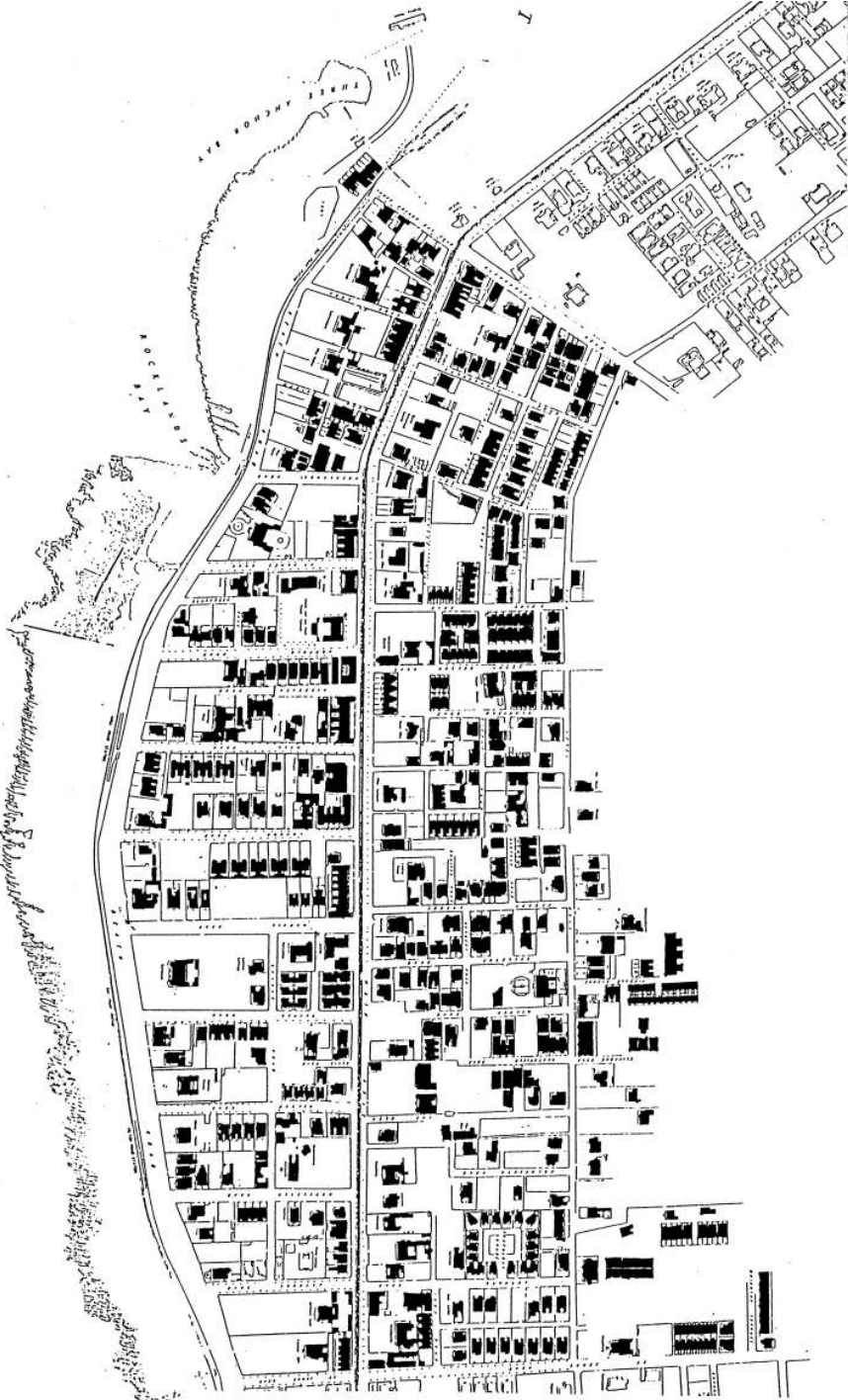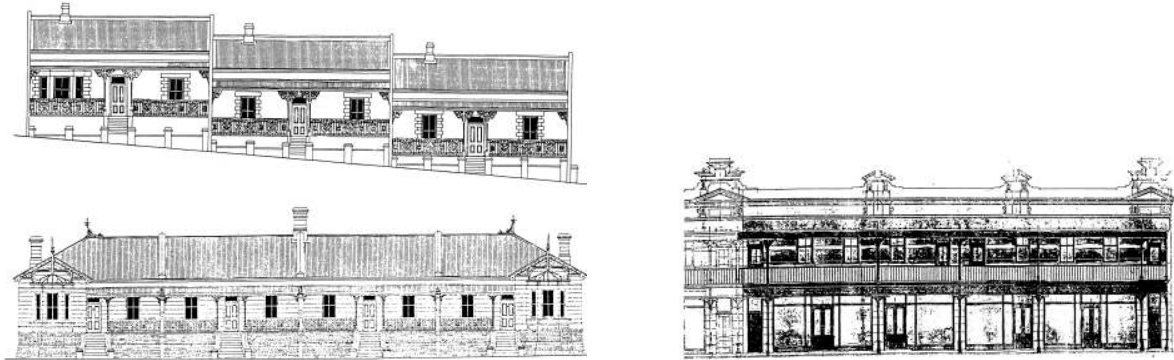**Figure 10: The Central Portion of the 1902 Green Point and Sea Point Survey.**
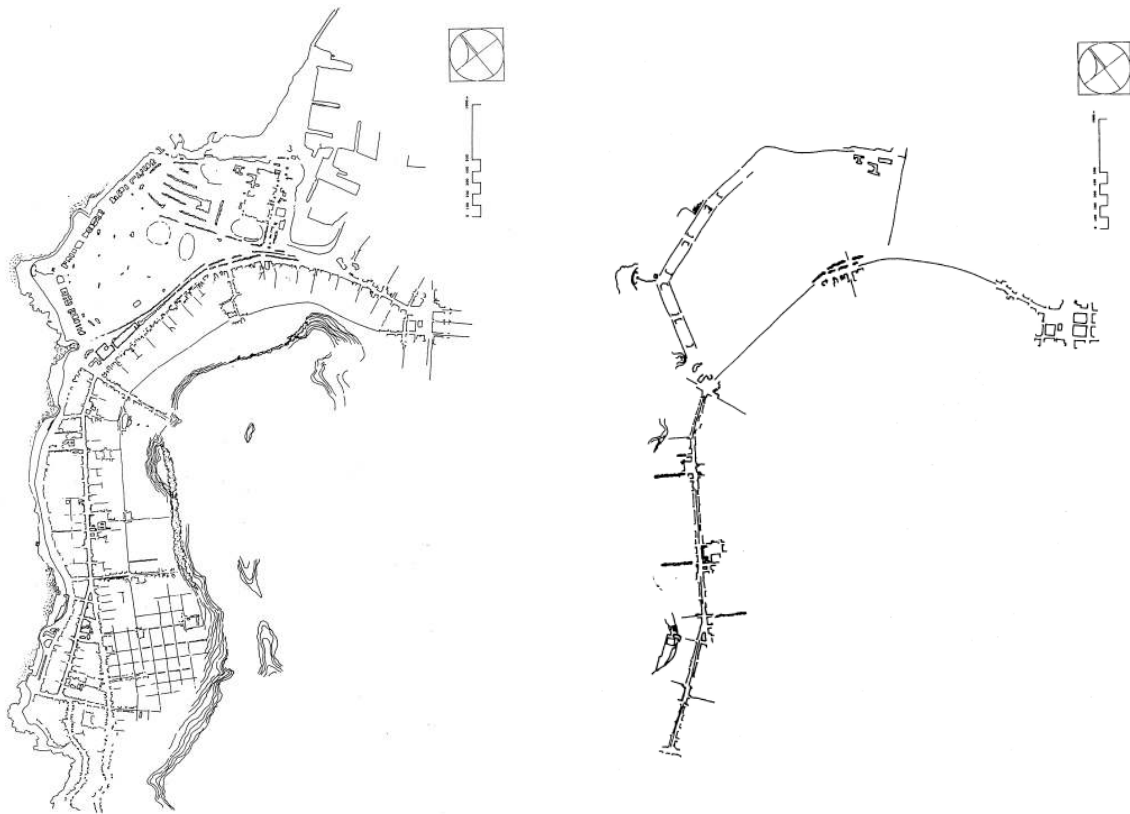
Figure 11: Examples of the private development infill.[38]

What is central to the development of this town extension is the laissez-faire evolution of the spatial structure of the area and the dominant public realm: places and connections. These are shown in figures 12 and 13.

Figures 12 and 13: The Spatial Structure of Green Point and Sea Point and the Public Realm of Places and Connections[39]

Clearly, as revealed by the foregoing, the private development infill was given order by a combination of: the prevailing natural constraints; the linear and corridor-like configuration of the limited available developable land and the structure of access thereto (mainly comprised of multi-functional streets rather than of roads) including the specific public transport alignments of tram and train services; the pattern of land subdivision; and the varied array of

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[38] From the top, references are: City of Cape Town Plans Archive 40, 32 and 995.
[39] These figures are taken from Todeschini and Japha, 1991.

building typologies.[40] The latter have been augmented in the years since the early 1900's by tall apartment buildings facilitated by the Zoning Scheme that came into force in the late 1940's. However, despite itself, the Zoning Scheme could never unscramble the mixed uses that continue to characterize the Main Road spine and corridor: a veritable 'high-street'. Figure 14 is a representation of the visual ensemble of the southern part of Sea Point, as it has developed, palimsest-like, in recent years, viewed from Signal Hill.

Figure 14: The View of the Southern Part of Sea Point[41]

4 CONCLUSION

During the 1800s at the Cape, development occurred gradually in both the town extensions discussed: the 'Newmarket' to the east and 'Green Point and Sea Point' to the west of central Cape Town. Yet, the respective morphologies and development processes were different in the two cases.

In the Newmarket, the plan geometry of major and minor public thoroughfares and of the large public market arose from a clear pre-existing tradition and was imposed as a finite plan. Private housing developments occurred within these site-making constraints, as the need arose and as owners sought opportunities. There was a clear plan for the 'public realm' conceived of in the terms of the earlier colonial town-building model, even if with the shifting exigencies of the day, new dwelling types—such as rows and terraces—were then made to fit into this spatial framework.

In the case of Green Point and Sea Point there was no a-priori plan. Rather, the plan evolved as a product of a process of transformation of the site from *woeste* and pre-colonial *veld*, through farmland, to commuter and recreational suburb during the 1800's and early 1900's. The morphology evolved as a result of the subdivision of estates in relation to the strong local topography and the major movement routes, along which line-haul public transport was

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[40] It has not gone unnoticed that there is considerable resonance in this matter of morphological analysis and prediction with Bill Hillier's Space Syntax approach. See e.g. Hillier et al. 1976.

[41] The figure is taken from Todeschini and Japha, 1991.

developed (see figure 9).[42] In contrast to the Newmarket town extension where the standard town block was pre-defined and repeated, here a great variety of urban blocks resulted.

In a nutshell, the later colonial practice was to subdivide the land lying between major routes by a grid of streets, the depth and length of resulting suburban 'blocks' being organized on the basis of a range of possible building lots, which in turn were informed by a range of housing types which were developed during the period: detached villas or manor houses, row and terraced houses, and special and hybrid buildings.

When the geometry of the principal public routes is seen in combination with the particular bays in the coastline and some other strong features of the landscape of the area, we may note the configuration of the spatial structure and of the public realm (figures 12 and 13). It would seem that it is these elements that provide the real enduring spatial organization of the development in the area: the location of land uses and the associated land values were fundamentally informed by the different levels of exposure and accessibility which the structure of major and minor routes facilitated at different points, as well as the relative environmental amenity value afforded by specific places and sites, without the need for land use controls such as zoning. With limited subsequent planning, a great deal of diverse private development has been facilitated, as may be seen in figure 14.

The plans of the recent town extensions of Delft and Khayelitsha (figures 3 and 4) are based on modernist conceptions of town planning and are very different in virtually all respects from those that founded the older Newmarket and Green Point and Sea Point. Unfortunately, the newer areas perform very poorly. They are not based on an urban conception but on a contrived suburban one: the classic urban street is nowhere to be found—the dictum "kill the corridor-street" has been followed absolutely, with disastrous results! In contrast to Le Corbusier, Louis Kahn said: "The street is a room of agreement … The city is measured by the character of its institutions. The street is one of its first institutions".[43] In a context characterized by poverty, scarce resources and lack of urban mobility, is it necessary to argue that Kahn's dictum makes infinitely more sense than that of Le Corbusier?

Moreover, the ideas of the 'city dynamic', the 'city of a thousand designers',[44] the 'partial vision', the 'natural city' (as contrasted to the 'artificial city' of modernism) and of positive 'informality'[45] cohere amongst themselves and they echo the essential characteristics of the physical organizing frameworks of both the Newmarket and of the Green Point and Sea Point town extensions of the 1800s at the Cape. Crane's notion of spatial 'Capital Design' (also known as 'Capital Web') as a twin to the 'Capital Budget' (typically utilized by any local authority in settlement growth management even under modernism), also resonates.

Consequently, I submit that these ideas are of relevance to town-building practice in South Africa today for many reasons. The most important appear to be that:

• they are predicated on a vital and open, rather than on a reductionist, mechanistic and closed conception of urban order/morphology and of the specific disposition and control of activities in space;

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[42] It is notable that the alignments of the most important routes had been progressively established across the study area in pre-colonial and earlier colonial times.

[43] Kahn, L. (1971).

[44] In his writings after the celebrated 'Chandigarh Reconsidered Studio' he taught at the University of Pennsylvania in the 1950's, David Crane wrote of the 'city of a thousand designers' so that the plan could be elaborated bottom-up, informally in effect.

[45] Roy 2005 (p. 156) has argued that "three pressing issues—moving from land use to distributive justice, rethinking the object of development, and replacing best practice models with realist critique—are not just policy epistemologies for dealing with informality. Rather, they indicate that informality is an important epistemology for planning."

- they indicate an overall approach to town-building which tends to focus on the most important elements of the morphology of settlement. In other words, the concern with morphology and process is selective and strategic rather than all encompassing. It is facilitative, enabling and positive and places public spaces, including the street, as the generative elements of a properly evolving urbanistic morphology. By definition, the approach is resilient;
- they require an interdependent conceptualization of the underpinnings to public leading actions and degrees of freedom available to private responses, mindful of the potentially complex processes involved in the dynamic formation and sporadic rebuilding of settlements by many actors;
- they are more attuned to a reality where much settlement-making initiative, energy and funding necessarily springs bottom-up, and where material construction, building expansion in plan and section (height) will occur over time, as 'sweat equity' and funding from the rental of back-yard rooms becomes available to the land owners; and, moreover
- the process of infill and city building becomes an educative one for all, including the poor majority.

In this structural and spatial approach, considerations of land uses and of any quantitative program are secondary. The emphasis is on the articulation of minimal urban structural and spatial actions rather than on total planning or design, and the primary public obligation is defined as the establishment of a spatial framework of viable and enduring collective urban elements that are likely to facilitate a range of positive private responses with the passage of time, leading to a consequent (yet not entirely predictable) layering of human occupation. The focus of public effort and expenditure is the public realm. The urban order they suggest is dynamic and always in a state of becoming: it is never final.

I would argue that in order to pursue the goal of urban sustainability via a strategy of resilience, a general minimalist 'public good' approach should feature, where the following considerations and basic informants pertain:

- desireable urban complexity is neither plan-able nor designable (particularly in developing contexts). But the spatial and non-spatial (institutional and procedural) pre-conditions therefore are plan-able and designable, and they need to be put in place. Guidance to private development should be offered as a matter of public policy;
- a minimum of three spatial scales should be handled by those undertaking the planning and the design (one scale up and one scale down from the focus of the precinct scale);
- the fundamental importance of the ecological and larger regional landscape setting provides some essential constraints: inter alia the specific presence and spatial disposition of resources that characterize the region (and the respect for them, if they are not renewable). As a consequence, the spatial particularities of the domains of Wilderness, Rural and Urban that obtain are most important, as well as where no development should take place;[46]
- the need to abandon the predominantly suburban and embrace an urban model, particularly a multi-nodal one made up of mixed-use intersecting transport corridors; since
- livability should be promoted as much as possible by people moving as pedestrians, with most of their daily needs being met locally, as a result of relatively short trips; and
- public transport should be available for longer urban trips.

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[46] The idea of, and the strategic need for, the three domains of wilderness, rural and urban was an astute and resilient regional conception and strategy devised by the forester, planner and conservationist Benton MacKaye during the 1920's: see the New York Regional Plan of 1927-9, prepared by the NY Regional Planning Association (Lewis Mumford collaborated).

Figure 15: The Layers of the Built Landscape: the elements of urban structure and space[47]
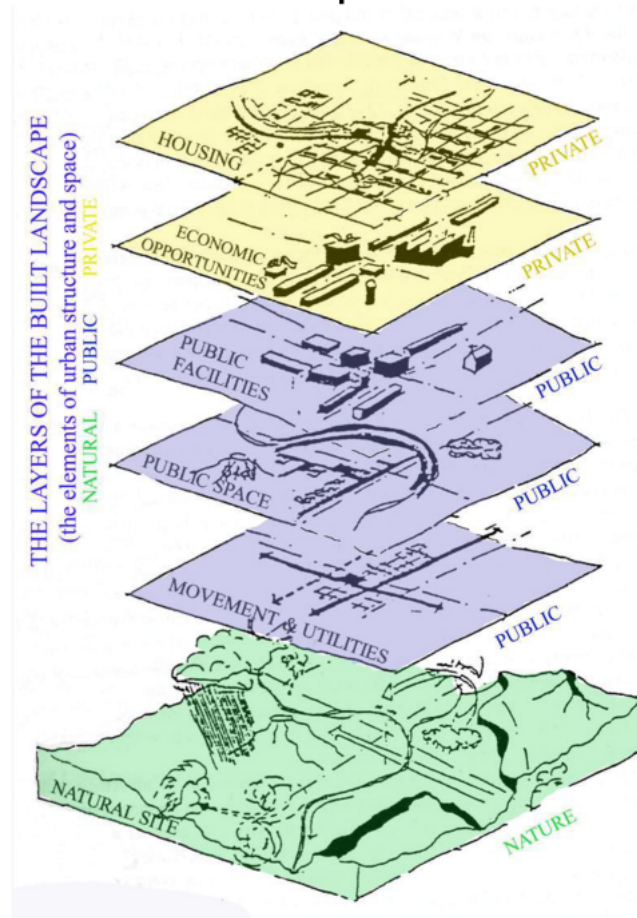
Within the urban domain, the public leading spatial planning and design decisions should relate to the following, the outcomes of which will be the spatial framework (the Capital Web of David Crane) (figure 15):

- **Green Space** (including urban agriculture);
- the **Network of Connection, Access and Services**, with special significance within these given to the essential multi-functional element of the street (not the road). Limited access roads should be so planned as not to 'fence-in' small local areas;
- **Public Facilities**; and
- **Urban Public Space.**

Collectively, within and in concert with the broader order of the landscape, these public leading decisions and actions will provide the framework for private responses of economic opportunities (business and commerce) as well as of housing (although some public housing should be strategically provided, virtually as public facilities should be) (figure 15).

If this rather simple 'story' from the African global edge and from a specific context that continues to struggle to pull itself out of modernist- and apartheid-imposed pathologies has any value beyond itself, perhaps it is that a shift in 'mindset' about the nature of an appropriate, partial and resilient spatial plan, prepared top-down, on the one hand, and about inclusive processes of in-fill and elaboration by many bottom-up, on the other, is at the core of how to promote sustainability through resilient cities. We do not need to invent a new paradigm: we should rehabilitate principles of urban design that were operative in South

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[47] The figure is an adaptation by the author of a diagram drawn for a theory paper by Clive Richards, when he was a masters student during the 1980's at UCT in the MCPUD Program of which the author was Convener.

African settlement morphology before the introduction of modern town planning and Le Corbusian urbanism. Naturally, the preparation of physical plans and designs in the public interest must pursue social justice and be paralleled by coherent and related economic and social development plans that are not the subject of this paper.

REFERENCES

Alexander, Christopher, 1966. "A City is not a Tree", *Design*, No. 206.

Conrads, Ulrich, 1964. *Programs and Manifestos on 20th Century Architecture*, MIT Press, Boston.

Crane, David A., 1960a. "Chandigarh Reconsidered", *American Institute of Architects Journal*, May.

Crane, David A., 1960b. "The Dynamic City", *Architectural Design*, April, pp. 158-162.

Crane, David A., 1960c. "The City Symbolic", *Journal of the American Institute of Planners*, November, 26(4), pp. 280-293.

Crane, David A., 1964. "The Public Art of City Building", *Annals of the American Academy of Political and Social Science*, Vol. 352, the Academy, Philadelphia.

Foglesong, Richard E., 1986. *Planning the Capitalist City: the Colonial Era to the 1920s*, Princeton University Press, Chapter 2.

Ghel, Jan, 1971. *Life Between Buildings: Using Public Space*, translated by Jo Koch, Van Nostrand Reinhold, New York.

Giurgola, Romaldo, 1965. "Reflections on Buildings and the City: the Realism of the Partial Vision", *Perspecta 9/10, the Yale Architectural Journal*.

Habraken, John, 1998. *The Structure of the Ordinary: Form and Control in the Built Environment*, edited by Jonathan Teicher, MIT Press, Cambridge and London.

Hillier, B., Leaman A., Stansall et al., 1976. "Space Syntax", *Environment and Planning B*, 3, pp.147-185.

Kahn, Louis, 1971. "The Room, the Street and Human Agreement", Address to the American Institute of Architects on his being awarded their Gold Medal, http://www2.latech.edu/~wtwillou/A310_410_IDES_Images_sum04/Kahn_1971_AIA_G old%20Medal.pdf (accessed 28th July 2013).

Lawrence Peter L., 2006. "The Death and Life of Urban Design", *Journal of Urban Design*, Vol. 11, Number 2, June, pp. 145-172, Routledge.

Le Corbusier (1930) *Précisions: Sur Un État présent de L'architecture et de L'Urbanism,* Collection de l'Esprit Nouveau, Paris. Translated into English by Edith Schreiber and published in 1960 with a new introduction by Le Corbusier.

National Planning Commission, Nov. 2011. *National Development Plan: Vision for 2030*, http://www.npconline.co.za/medialib/downloads/home/NPC%20National%20Developm ent%20Plan%20Vision%202030%20-lo-res.pdf (accessed 6th May 2013).

Regional Planning Association of New York, 1927. *Regional Plan for New York State*, NY.

Roy, Ananya, 2005. "Urban Informality", *Journal of the American Planning Association*, Vol. 71, Number 2, pp. 147-158.

Todeschini and Japha, 1991. "The Green and Sea Point Local Area Draft Town Planning Policy Plan Phase 2 Final Report", unpublished, prepared for the City Planner's Department, Cape Town City Council, March.

Todeschini, F., 1995. "Some Aspects of Town-Building at the Cape During the 1800s of Relevance to Today", *Planning History Study Group 1994 Symposium Proceedings: Places, People and Planning*, University of Pretoria, Vol. 1, pp. 145-189.

Todeschini, F. and Japha, D., 2004. "Cultural Identity and Architectural Image in the Bo-Kaap, Cape Town", in Alsayyad, N. (ed), *The End of Tradition?*, Routledge, San Francisco and London, pp. 187-209.

Todeschini, F., 2013 "Towards Contemporary Resilient Settlement Planning: some reflections on the 'nature of an appropriate spatial plan' from the perspective of the post-colonial African 'edge' ", *Proceedings of the Joint AESOP/ACSP Congress, Dublin 2013, July*: http://www.aesop-acspdublin2013.co.