Appropriating modernism: Apartheid and the South African township

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Abstract:
Modernism has been used during the 20th century to support and justify political aims and agendas in nefarious ways. Although social inequality in South Africa has roots in its colonial past, it was during the 1950's that institutional segregation was formalized resulting in race-based urban spatial structures and inbuilt inequalities. The paper outlines how the modern movement provided a rationale for advancing this programme as a largely technical exercise that enabled the social and political contradictions involved to be sidestepped. Traced is the early impact of the modern movement in South Africa and the emergence of close relationships between local and European protagonists. The application of the modernist agenda is discussed in relation to the spatialisation of race, the emergence of the apartheid city in the 1960's, and the delivery of a mass housing programme in the segregated townships. Conclusions are drawn concerning the extent to which this legacy has resulted in highly inefficient cities that now confront post-apartheid South Africa in the 21st century.

Key Words: Modernism, South Africa, housing, apartheid

Introduction

The Modern Movement was frequently used during the 20th century to support political aspirations and symbolize modernism. For example, the first Labour government in New Zealand (1935-1949) that promoted itself as being modern, was quick to embrace the modernist urban visions of émigrés architects fleeing Europe to New Zealand for its State housing programme. Employed by the Department of Housing Construction, they produced high density inner city apartments derived from their European experience during the 1940's, contrasting with the government's earlier suburban housing developments (Haarhoff, 2006), resulting in high density inner city developments in Auckland and Wellington.

The chaotic partition of India following independence in 1947, and the building of Chandigarh as a new state capital in Indian Punjab provides another example. Anxious to promote independent India as a modern state, Prime Minister Pundit Nehru captured the opportunity to promote its planning

as '...symbolic of the freedom of India, unfettered by the traditions of the past…an expression of the nation's faith in the future' (Kalia, 1999:21). The appointment first of the American planner Albert Mayer (who had close connections to Clarence Stein), and then Le Corbusier for this task, was a potent symbol of eschewing tradition in favour of what was perceived to be modern, and the modern vision Nehru held for the future of India as a whole. This position of course stood in opposition to Mahatma Ghandi's vision of a future craft-based economy, a point of conflict with Nehru.

Although South Africa shares a colonial history of racialised attitudes and conditions with many other countries, it was the 1948 election of the National Party that resulted in the ideology of apartheid and its subsequent brutal enforcement. Building on a myth of early white settlers encountering an empty land and their fear of Black domination, led to the conceptualisation of 'separate development' for Black South Africans outside of territory designated as 'white'. Apart from the inhumanity involved, there was also the 'problem' of how to meet the demand for Black labour in the urban areas, while at the same time maintaining cities as the preserve of white capital and privilege. The 'solution' was found in two ways: the implementation of a low-cost mass housing programme located on urban peripheries in designated 'black' zones, and in the enforcement of racial segregation by law covering all aspects of social, economic and political life. The associated segregated housing programmes were justified by pointing to 'modern' planning and design principles and theories being deployed. The outcome from the 1950's was the formal construction of the apartheid city with its distinctive spatial structure and inbuilt inequalities.

The article outlines the way in which the modern movement provided a rationale for advancing this programme as a largely technical exercise that enabled the social, economic and political contradictions involved to be sidestepped. What is traced is the development of a close relationship between local and European protagonists and the early adoption of the modern movement among architects and planners in South Africa. The application and appropriation of the modernist agenda is discussed in relation to the spatialisation of race, the emergence of the apartheid city in the 1960's, and to the conceptualisation and delivery of a mass housing programme in the segregated township over the next 30 years. Conclusions are drawn concerning the perception of urban planning as a benign force. Observations are drawn concerning the extent to which this legacy has resulted in highly inefficient cities that now confront post-apartheid planning authorities in 21st century democratic South Africa.

The modern movement in South Africa
From its origins in the Netherlands and Germany in the first and second decades of the 20th century, the ideas of the Modern Movement in architecture and planning were spread globally. This influence appeared much earlier in South Africa when compared to England and the USA, and the Dominions of Australia and New Zealand. (Herbert, 1974) In 1928, a study tour by architecture students from the University of Cape Town included visits to the newly completed *Bauhaus* in Dessau designed by Walter Gropius (Herbert, 1974). Architecture students, Rex Martienssen and Norman Hanson from the University of the Witwatersrand in Johannesburg, followed up with their own study tour of Europe in 1930, and among other places, visited the newly completed *Weissenhofsiedlung* in Stuttgart. Here,

Mies van der Rohe was responsible for the site layout intended as a demonstration of modern movement planning and architecture, that included his apartment building. Also represented in the model development were buildings designed by Le Corbusier and Walter Gropius, among other emerging modern movement protagonists. Writing in the *South African Architectural Record* on his return to South Africa in June of that year, Martienssen observed:

> *Das Neue Stuttgart! It is wonderful. And I am so enthusiastic…I can hardly wait to build something…There is only one architecture…and here the architecture is one of contemporary life. There is no stylism or copyism, but only fitness for purpose and beauty of form.' (South African Architectural Record, June 1930:67)*

Martienssen goes on to comment further that 'the influence of men like Gropius…must be good, because their work has its basis in a rational approach to the problem' (South African Architectural Record, 1930:69). While in Rome, Martienssen purchased a copy of Le Corbusier's *Collected Works: 1910-1929*, and the impact of both the book and the European experience led to him becoming a strong protagonist of the Modern Movement in South Africa. In 1933 Martienssen wrote a manifesto called *Zerohour*, showcasing new work from Europe including that of Le Corbusier and Gropius, and the emerging modernist practice and discourse in South Africa. Commented on by *The Architecture Review,* the observation was made that '…South Africa has leaped forward with (the publication of *Zerohour*) as a final answer to those who image that colonial architecture is in a more neo-Renaissance state that it is in England…Let Australia, Canada and New Zealand do likewise' (The Architecture Review, Oct 1933:155-156).

Martienssen returned to Europe in 1933, and this time arranged to meet Le Corbusier in his Paris office. Herbert (1974) comments that Le Corbusier was 'deeply impressed' with Martienssen who had brought South African modernism to international attention. Indeed, Martienssen was to receive an invitation in 1937 to join the 5th meeting of the *Congrès International de l'Architecture Moderne* (CIAM). This never to materialised because of the Munich crises and impending Second World War, along with Martiennssen premature death in 1942. However, in 1938 a conference was organised by students at The University of the Witwatersrand, Martienssen by then a member of staff, that presented:

> *Le Corbusier's drawings and themes, and from…(Le Corbusier) an opening message; sociologists and psychologists provided an 'approach'; practitioners and academics contributed 'theses'; and self-avowed modernists gave papers and 'demonstrations' on the application of modern planning ideas to hypothetical projects not only for a new business centre for Cape Town, but for a 'model native township'. (Mabin and Smit, 1997)*

The inclusion of a 'model native township' in the conference did expose contradictions between the idea of Modern planning as a vehicle for radical social change, which, as Mabin and Smit (1997) point out, 'peppered' the conference proceedings, and acceptance of the prevailing order of racial segregation and inequalities prevailing in South Africa. The 'model native township' was produced as a thesis by students at the University to demonstrate the application of rational, modern planning and design approaches. The standardisation of housing types, rational and geometric

design layouts in landscaped settings reflected the work of European urbanists such as Ernst May and Ludwig Hilberseimer.

To his credit, Kurt Jonas (one of the students concerned) did argue that it was incumbent on modern architecture to work for social change, and when confronted with segregation saw the need to 'generate a formal model for housing which could be substantiated in political, social and 'scientific' terms' (Japha, 1983). Ironically, it was precisely this approach that was to lead to the formal appropriation of modern principles to justify the State's mass housing programmes after the Second World War. But before turning to this matter, it is important to contextualise the housing programmes in the segregationist policies then prevailing in South Africa.

Spatialising race

South Africa has shared along with many other previously colonised countries race-based policies, where land and resources have been the material issue of conflict between indigenous peoples and settlers. What distinguished South Africa was the extent to which this process was institutionalised and enshrined in law. Driven by the discovery of gold and diamonds in the 19th century, rapid industrialisation led to a demand for labour (largely supplied by Black South Africans), triggering their movement from rural hinterlands to the growing industrial centres. With no formal provision for housing, this led to the emergence of slum conditions, making the process and outcome very visible in cities. However, as Mabin and Smit (1997) point out, unlike other colonial territories such as Singapore where housing was located in designated 'ethnic' zones, towns in South Africa had been conceived primarily as 'white' places. Thus the demand for black labour created a dilemma: how to manage Black urbanisation on which future prosperity depended, while at the same time conceiving cities as 'white' places? An early solution to this perceived dilemma was found in the Native (Urban Areas) Act in 1923, that embodied the view of the Stallard Commission investigating the issue:

> …the natives should only be allowed to enter urban areas which are essentially the whites man's creation when he is willing to enter and minister to the needs of the white man and should depart there from when he ceases to so minister. (cited in Haarhoff, 1984:70)

Local authorities at that time were vested with the responsibility of providing urban services, but the 1923 legislation now required the establishment of segregated residential areas for whites and blacks, the latter in what were designated 'native locations' as temporary places of residence. As temporary places, investment was understandably very minimal because of the anticipation of 'temporary' urban residents returning to rural 'homelands' once they no longer laboured in the cities. Despite government resistance, the practical reality was that Black South Africa had by this time become effectively permanent, although insecure and disenfranchised, urban residents.

Anticipation of post-Second World War reconstruction unleashed a modernist planning fervour, leading to the establishment of regional planning authorities charged with the task and planning for industrialisation and urbanisation (Mabin and Smit, 1997). Reconciling racial segregation with town planning principles that advocated positive social outcomes, once again highlighted contradictions. The establishment in 1944 of the Social

and Economic Planning Council (SEPC) to advise the government of the day brought the issues of urbanisation, planning and segregation together in a modernist discourse that drew heavily on British planning studies and reports of that time (Mabin and Smith, 1997). The Council adopted the notion of creating coherent communities separated by "green belts", justified with reference to their deployment by the New Town Movement in America and Britain at that time. In the context of South Africa, separating communities by green belts translated easily into the idea of planning racially distinct zones.

> The Union (of South Africa) has a large and growing permanently urbanised non-European population. The Council…. therefore, urges that in the lay-out of new townships, the re-planning of existing ones and the erection of state-subsidised housing schemes, full use should be made of the principle of planned neighbourhoods, protected from other neighbourhoods by 'green belts' of cultivated and park land…' (Mabin and Smit, 1997)

Indeed the SEPC went on to be clearer in its directives: 'that it regards the separation of residential areas of different races…as a function of planning in this country…Residential segregation must be the result of a valid and accepted national policy…(although) no legal basis exists for this at the present time…' (Mabin & Smit, 1997).

It was the election of the National Party in 1948 that created the legal basis for racial segregation in South African with a manifesto requiring compulsory urban segregation and the 'separate development' of Black South Africans outside of territory designated as 'white'. The flurry of legislative measures that followed created independent black 'countries' based on tribal affiliations, the so called 'Bantustans' comprising 17 percent of the land for 70 percent of the total population. Within urban areas, apartheid legislation was extended under the Groups Areas Act of 1950 to also require separate residential areas for those of White, Indian and 'Coloured' (mixed-race) decent. Tight restrictions were placed on the movement of Black South Africans that required permits ('passes') to be in 'white' urban centres. Achieving the required racial segregation led to massive upheavals for those (mainly non-white) who ended up residing in the 'wrong' racial zone and suffered the inhumanity of being relocated, disrupting lives and livelihoods.

Thus under apartheid legislation, land was designated for occupation by different race groups, and residential areas treated as racial "zones". In this context it is not surprising to find that Floyd's 1951 planning handbook 'Township Layout' lists "Native Locations" as a separate "zone" from "Residential Areas" (Floyd, 1951). Unexplained is the fact that "Residential Areas" are for exclusive white occupation. The areas 'set aside' for black occupation where usually on the peripheries of cities, and where possible (such as around Durban and Pretoria), located in the adjacent 'Bantustan'. This was to ultimately create the illusion of urban Black South Africans living outside 'white' South Africa in independent 'countries'. Closer to the city centres, other 'race zones' were demarcated for those classified as White, Indian and Coloured. Moreover, spatial separation also required that each group be separated from others by what were now described as 'buffer' strips (see figure 1). As Floyd (1960:204-5) explains:
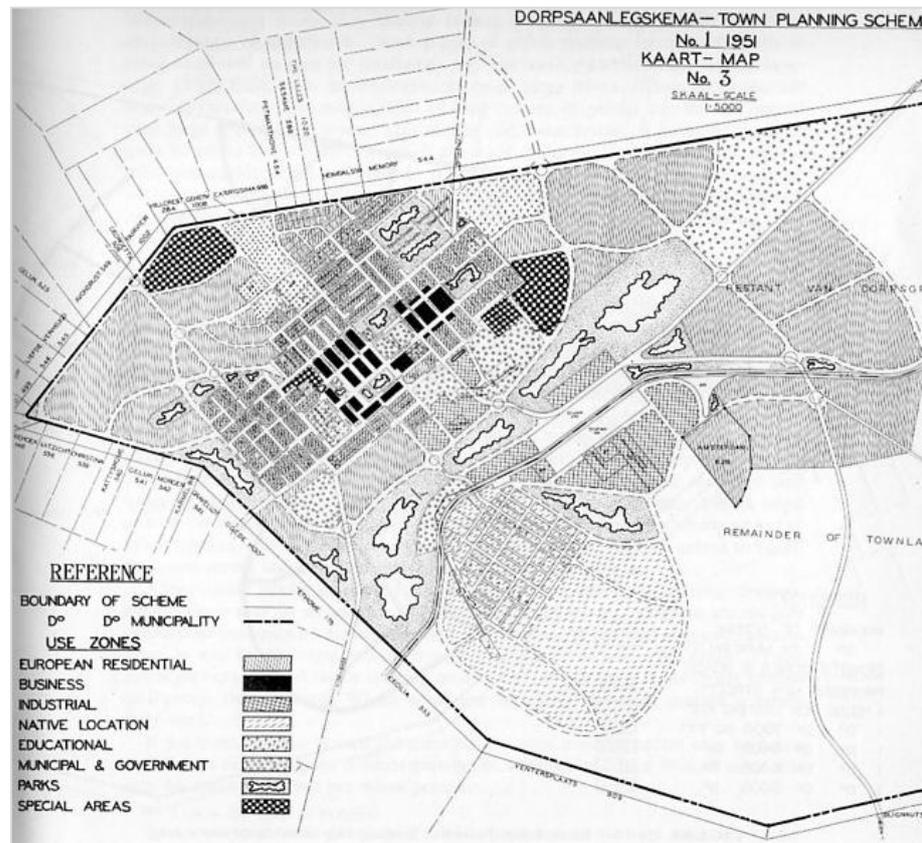
Figure 1. Town Plan of Reitz, Transvaal, South Africa, 1951. Map showing use zoning. The 'Native Location' is indicated in the centre bottom of the plan, separated from the 'European Residential' zone by a buffer strip comprising parklands and the industrial area. (Floyd, 1960:115)

'Railway lines, main roads, rivers, streams and ridges all form separation media and these should be used as far as possible. Where no suitable feature of this sort exists…the Group Area Board may insist on a buffer strip. In the case of native locations buffer strips varying in width from 200 to 500 yards…and are insisted upon by the Minister of Bantu Administration.'

By this time, any pretence at legitimating racial separation by way of 'green belts' gave way to the brutal reality of 'buffer strips' and the government's overt apartheid policies impacted on the political, social and economic lives of all South Africans, but especially those who were not white.

'Native' townships in South Africa

A key part to the implementation of apartheid in the post World War 2 years was the planning and construction of mass housing schemes to enforce comprehensive residential segregation. The vast expenditure and effort involved was justified by the Secretary of Native Affairs, W. Eiselen, when expressing the view that 'only with the provision of adequate shelter in properly planned Native townships can full control over urban natives be regained' (Chipkin, 1998). Implementing the housing projects in the 1950's did demand large investment, and the Pretoria-based Council for Scientific and Industrial Research (CSIR) through its National Building Research

Institute (NBRI) was charged with drawing up national standards for state funded housing while minimising cost.

Among those recruited to the NBRI to work on their housing research programme was P. H. Connell, a graduate from the University of the Witwatersrand and one of the student authors of the 'model native township' referred to above. Another was doctoral graduate D. M. Calderwood whose thesis "Native Housing in South Africa' was published in 1953 with funding from the CSIR. Calderwood's thesis focussed on the prevailing issue at that time: how to implement the government's post-Second World War township building programme and minimise costs. In his commendation of the thesis, William Holford, then Professor of Town Planning at the University of London, describes the work as 'a breath of fresh air' because it shows that 'the technical, the social and the economics of housing must be looked at together'. The aims in Calderwood's thesis underscored the comments made by Holford in being:

> *…to study the technical approach to the problem of housing urban native families. The technical approach can only indicate the way; it remains for housing policies to be framed in terms of scientific findings to pave the way to a solution. The work, which follows, will discuss the theoretical aspects of housing standards and neighbourhood planning, then the practical application of these findings to the design and construction of two experimental Native townships'. (Calderwood, 1953:14)*

In his thesis, apartheid remains the "elephant in the room", neatly sidestepped with uncritical references to 'Legislation' (meaning apartheid legislation) as a given context. The work adopts a largely technical approach focused on housing standards and neighbourhood planning, legitimised by empirical study and the citation of international research. This includes the seminal works of Patrick Geddes and Lewis Mumford, and Clarence Stein's 'neighbourhood unit' concept developed at Radburn. Also cited is the body of work emerging in the United Kingdom in the 1940's including work from Jane Drew and Maxwell Fry, Frederick Gibberd, and the early work on the British New Town Movement. Ernst May's planning of Frankfurt's urban expansion in the 1930's using satellite towns surrounded by green belts provided justification for the peripheral location of segregated peripheral townships separated by green 'buffer' belts.

Also fundamental to Calderwood's approach to the planning and design of 'townships' was the authority he borrowed from Patrick Abercrombie's advocacy of detailed study and his dictum "survey before plan' (Houghton-Evan, 1975). Calderwood thus stresses the importance of social surveys in understanding the changed attitudes resulting from urbanisation: '…the variation of topography and climate and the idiosyncrasies of human groups must affect every scientific calculation, everyway, practical and artistic, of doing things' (Abercrombie cited in Calderwood, 1953:95). Elsewhere Calderwood cites Lewis Mumford on the necessity of this approach: 'first we must erect a standard of living. In terms of housing, the minimum standards are set by objective criteria of air, water, sunlight, heat, privacy and so forth, and further modified by social provisions proved to be necessary or the nature of children and the education of responsible citizens' (Mumford cited in Calderwood, 1953:14). Despite Calderwood's reference to the need for social surveys, he points out that information of this type relating to the urbanising Black population was either not available or still to be obtained.

The lack of social data reinforces Calderwood's argument for rational methods with its emphasis on technical solutions.

A significant part of Calderwood's thesis is devoted to the establishment of minimum housing standards based on 'social aspects, space organisation, protection against the elements, materials, constructional method (and) economics…' (Calderwood 1953:17). He designed three housing types designated NE 51/6, NE 51/8 and NE 51/9, where the acronym 'NE' is 'non-European', dated 1951 types 6, 7 and 9 (see figure 2). Although Calderwood does stress that these were intended as a demonstration of the outcome to the rational design process, they were nevertheless taking up by government and housing authorities to be reproduced in the thousands across South African for three decades from the 1950's (see figure 3).

Necessary cost economies are seen to be essential, although this is seen as an advantage because '…they prevent unnecessary ornamentation and force the selection of good materials which require little maintenance, and they tend towards efficient design in terms of function…' (Calderwood, 1953:43). Although higher standard housing can be considered where subsidies are provided, Calderwood (1953:43) cautions against this by citing Walter Gropius: 'Subsidies do not lead to a real solution of the housing problem. They are to be considered only as a measure of transition…'
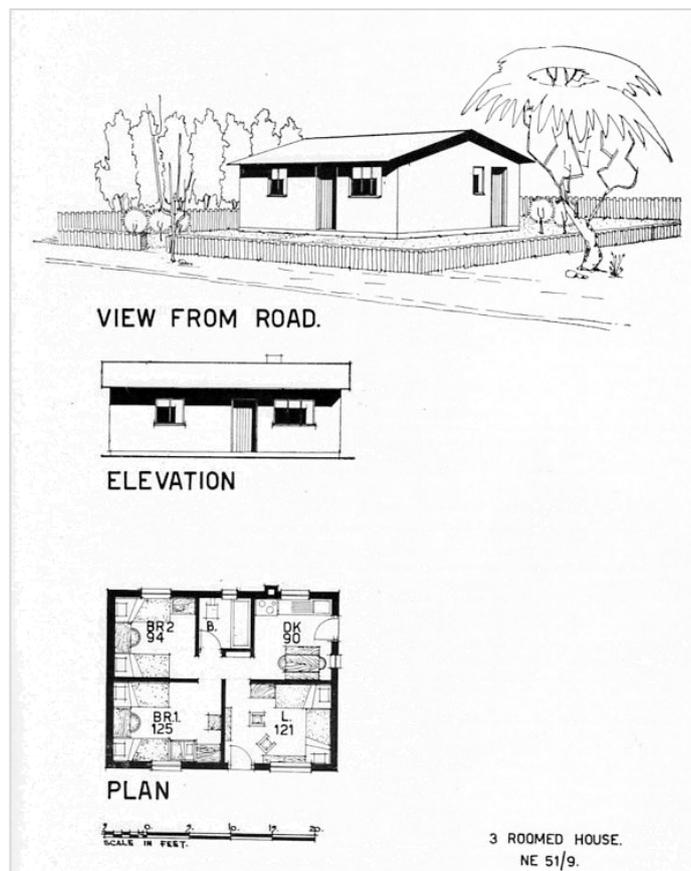

Figure 2. *The NE 51/9 standard three-roomed house (Calderwood, 1953:31).*

Figure 3. *The township of KwaMashu, near Durban in 1959 (Maasdorp and Humphreys:1975)*

Calderwood does suggest that humanising the inevitable monotony of the township is necessary, proposing that this be achieved through landscaping and the encouragement of individual private gardens. This vision and approach is of course reflective of the Modernist position articulated by Le Corbusier in moving from his perception of the 'pre-machine age Garden City' to the modern world with cities set in vast landscaped parks modelled on his Ville Radieuse. It is also evident in the work of Ernst May and his approach to the design of his Frankfurt housing schemes of the 1930's, involving the definition of a limited number of housing 'types', able to be mass produced using industrial methods (Bullock, 1978).

The establishment of the standard house did include strong advocacy for home ownership, a matter that stood in contradiction to the government's stance that Black South Africans were temporary residents of 'white' urban areas. This was however a matter on which the government did waiver, and Calderwood cites a 1952 National Housing Planning Commission's circular urging homeownership because '…from an administrative point of view, ownership schemes are easier to administer. And from a national point of view, home ownership is a stabilising influence and one of the main bastions against Communism and other social ills' (Calderwood, 1953:14). The contradiction concerning urban permanence is 'resolved' through the fiction of locating townships in an adjacent Black 'homeland' outside of 'white' South Africa, where permanent tenure and home ownership was granted.

Receiving equal attention from Calderwood is 'neighbourhood' planning although he stresses that 'in Native housing schemes, the first object is to simply supply shelter at minimum cost…and the second to create an environment conducive to living a full and happy life' (Calderwood, 1953:113). He also contends that the 'economics of densities in Native housing…depends to a large extent upon single-storey development', and that this is 'upsetting from the point of view of aesthetics, in what may be called monotonous single storey barrack layouts.'

The solution he advocates is 'to introduce imaginative layouts and landscaping to solve the problem' (Calderwood, 1953:94). Demonstrations of site layouts include landscaping of the neighbourhood, provision of vegetable gardens, and the grouping of houses to support the concept of 'a

neighbourhood of families'. The influence of Clarence Stein's 'neighbourhood unit' centred on a primary school with vehicular and pedestrian separation is clear in Calderwood's proposals (see figure 4):

'The practice of separating vehicular and pedestrian access is one which requires a great deal more consideration in Native housing. The Creation of safe pedestrian access to schools and playing fields is a demand of every parent, and if such pedestrian access could be entirely free of any roads used by vehicles, then planning would be ideal' (Calderwood, 1953:100).
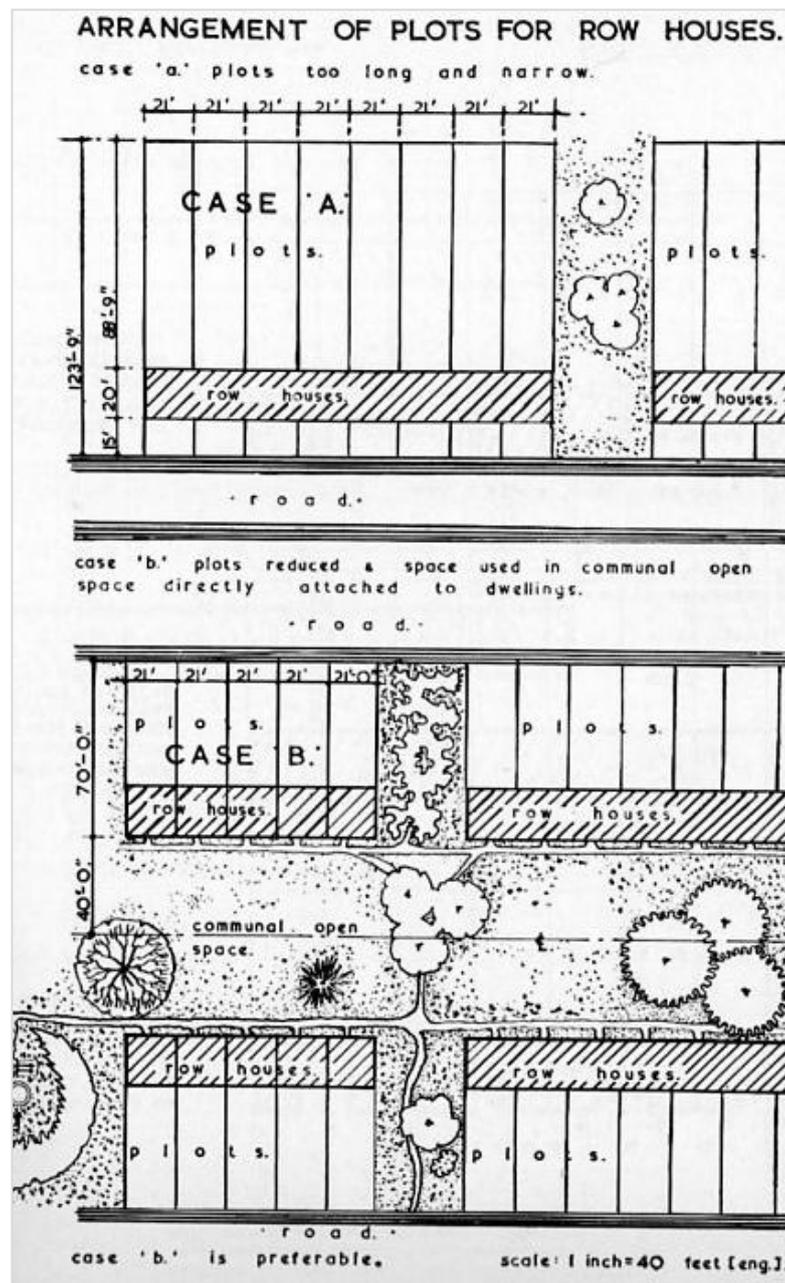

Figure 4. *Comparative study of standard row house type, where 'case B' is indicated to be preferable. Case B incorporates a communal space accommodating pedestrian movement (Calderwood, 1953:63)*

Conclusions

Modernism had run its course by the 1960's, given the mounting evidence of failure to deliver socially relevant housing solutions from around the world. Jane Jacobs and her *Death and Life of Great America City* gave critical voice to these concerns. A new generation of students at the University of the Witwatersrand gave expression to their concern about this failure in 1962 in a manifesto 'For Us' in which they declared:

> *'We decline to accept architecture as a complacent perception of standards and concepts that are no longer valid…By not taking into account man's fundamental requirements, demands and expectations, contemporary architecture betrays its roots, and forces us to come to terms with the implications of its original message'. (Jonas, 1962)*

At a conference 'Housing People' hosted by the Institute of South African Architects in 1975, voices of oppositions were heard against the government apologists present. Thus while the Minister of Community Development (responsible for the urban segregation) declared that, 'Today housing is the most important link in the process of community development and it has acquired a new living meaning in our civilisation', Michael Rantho, President of the Black Social Worker's Association, responded 'I really feel that the housing situation is somewhat bedevilled by one thing…it is very well to talk about land ownership…but Black people in South Africa have a feeling of belonging nowhere, with no permanence and no security' (Lazenby, 1977).

On the 16 June 1976, police fired into a large crowd of schoolchildren in the township of Soweto, Johannesburg. The incident, while sparked from a revolt about education, reflected on much larger issues of oppressive rule, deteriorating socio-economic conditions, and the exclusion of the majority of South Africans from political processes. Given the arguments expounded on creating family life, good citizenship and neighbourliness in the townships following international planning and design principles, it is ironic that the township became the symbol for a revolt. Just as the failure of modernism has been pinned on a determinism that seeks technical solutions to social issues, so the Soweto riots and its brutal suppression symbolised the avoidance of the overwhelming problem: the perpetuation of apartheid policies in South Africa. The events of 1976 marked the beginning of the long struggle to end apartheid, leading to democratic elections in 1993 and the ending of apartheid.

Achieving urban transformation and prosperity in South Africa was always going to be difficult. Unlike political transformation achieved on the day all South Africans went to the polls, the legacy of apartheid is deeply embedded in the urban form and the spatial structure of cities. The legacy of apartheid includes the townships located on urban peripheries, with ongoing large scale commuting on the part of residents from impoverished and poorly serviced areas to urban centres where the economic opportunities and higher order facilities are located. This urban legacy cannot be wished away or easily reformed, and underscores the fact that the removal of restrictive legislation did not in itself result in urban reintegration (Christopher, 2005). The South Africa city continues to be defined by spatial separation, fragmentation and sprawling between different parts and functions of the city with considerable social and economic inequalities. This has led the World Bank to characterise the South African as some of the most inefficient cities in the world (Mabin and Smit, 1997).

Not surprisingly the World Bank suggested that reconstruction should aim to achieve higher density and more compact urban form. This brings new focus on restructuring South African cities to achieve more compact, higher density, public transport-based and spatially integrated cities. Another important imperative for more compact urban forms is the goal of sustainable development now high on the agenda of the international community. The legacy of the apartheid city, with its inefficient form will make meeting social integration and sustainable goals very difficult challenge. (Haarhoff, 2008).

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