

The Urban Structure of South West Africa/Namibia Viewed within a Third- World Framework

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In comparison with the urbanization patterns of developed Western countries, Third World countries present quite a different urban fabric and set of problems. In this article, the Third World framework is used to analyse the urban structure of South West Africa/Namibia with regard to: (1) the unbalanced spatio-temporal pattern of national urbanization; (2) the primacy role of Windhoek in the national hierarchy; and (3) the colonial basis of town formation. The results of this study show that this urban system has developed in a heavily unbalanced way temporally, spatially, and ethnically. As opposed to the highly urbanized saturation level of the white population, black population groups are presently undergoing accelerated urbanization. The immaturity of the urban hierarchy is demonstrated by the parasitic primacy of Windhoek, which overwhelmingly dominates other urban centres in population, economic, administrative, and infrastructure characteristics. The country's German colonial past and South African involvement are in part responsible for this unsatisfactory state of affairs, as well as for the imprint left on the internal layout and urban land use patterns. Thus, Windhoek is found to be an amalgam of Third World colonial and Western European urban structures. Because the nation is currently undergoing social and economic development, the full impact of urbanization has not yet been experienced. This study concludes that this country faces the dilemma that definitive development strategies and corrective measures for the urban system are not possible before the ever-elusive political-administrative settlement brings internal stability to SWA/Namibia.

The attention of the world community has recently focused increasingly on South West Africa/Namibia (SWA/Namibia). The problems and actu-

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ality of this developing Third World country are rooted in a set of complex characteristics: a stormy colonial history which has debouched into the present revolutionary activities and situation of escalating conflict, a location in Southern Africa strategic for several international interest groups, an extensive land area with vastly contrasting physical environments, a relatively small but ethnically heterogeneous population, and a modest economic base, infrastructure, and urban system that hinder development initiatives. The role of the country's urban structure as an absorber and innovator of economic, technological, cultural, and politico-administrative activities should not be underestimated in the compilation of constitutional and development scenarios.

A country's urban structure is nourished by the process of urbanization, a universal phenomenon by which towns and cities grow over time as their society is transformed from the rural to the urban way of life. However, the process seldom proceeds in an orderly or optimal manner. Although urbanization is a positive force in improving the quality of life in developing countries, associated problems have a negative effect on urbanites' daily living and working space. In contrast with Western urbanization patterns, which find expression in industrialized and developed communities, Third World urbanization presents a different kind of structure and set of problems (Dwyer, 1974; O'Connor, 1983).

Third World Urbanization

To serve as a frame of reference within which the urban system of South West Africa/Namibia can be interpreted, three general characteristics of Third World urbanization need to be highlighted: unevenly accelerating urbanization, the tendency towards primate city development, and the influence of the colonial milieu.

Unevenly Accelerating Urbanization

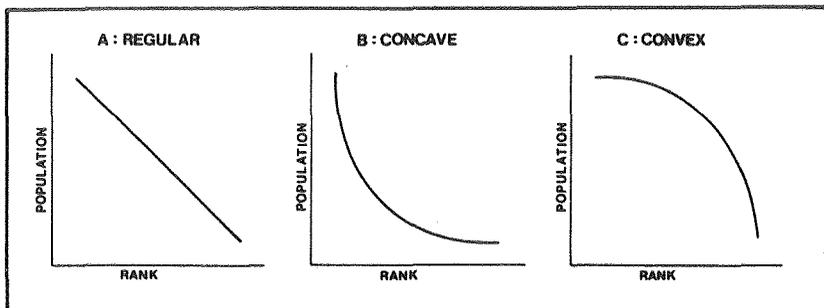
The process of national urban growth typically occurs in an unbalanced way over time and in space. A disproportional spatial distribution pattern of urbanization implies that not all cities and towns are accomodating a proportional share of the rapidly-growing urban population. Further, the typical S-curve pattern produced during urbanization (Van der Merwe, 1983) locates countries at different stages of urbanization along a time scale. Thus, as opposed to the position of the Western countries currently in a terminal-saturation stage of urbanization, most developing countries are at a relatively low level of urbanization, but one marked by an accelerating growth rate. This growth rate must be viewed against the background

of the high rate of natural increase of the urban population and an intensified rural-urban migration process. Stimuli of the latter process include the deficient economic base in rural areas and the inhabitants' perception of a better quality of life in cities and towns. Often, these expectations are illusory and are realized only for some, because the low levels of technology and industrialization mitigate against the creation of a sufficient number of jobs for incoming migrants. The resulting poverty conditions force many of the city's newcomers into informal and traditional economic activities, while serious housing shortages lead to squatting. Some Third World cities consequently experience a condition of virtual overurbanization as their formal urban structures fail to absorb the flood of population. On the other hand, such conditions may still be an improvement on the rural origin and need not always have negative connotations.

Primate City Development

Unbalanced urban development is accompanied by the effect of selective urbanization in a single city. Generally, the core settlement enjoys an historical advantage, owing to the preferential treatment given to it by a colonial power in the process of developing its own interests and activities. Other centres are thereby neglected, so that the nation's hierarchical urban system evolves out of balance, resulting in a single primate city of disproportionate size that greatly overshadows other urban settlements. Jefferson (1939) originally conceptualized this phenomenon, while subsequent studies have provided more insight into the properties of primate cities. Compared with the remainder of the urban system, these cities usually have a firm economic base, effective agglomeration economies, accumulation of capital, a substantial internal market, and significant employment opportunities, all of which stimulate self-sustaining growth. Added to these are the centralization of political-administrative power, a strong national influence, the concentration of infrastructure, socio-cultural activities, and expertise and technology, and the stage is set to attract large numbers of people from the hinterland (Brutzkus, 1973; Lemon, 1977; Ettliger, 1984). These polarized urbanization and migration processes are typically associated with countries that characteristically have relatively small land area, high population density, low per capita income, and an agricultural and export-oriented economy (Linsky, 1965). Differences of opinion exist, however, regarding the positive and negative externalities of primate cities (Hoselitz, 1955; Mehta, 1964; London, 1977). In the short term such cities can become parasitic, draining development and investment away from other urban centres. In the long term, however, they can function as gener-

Figure 1.
Urban Rank-Size Patterns



ators of development and increased quality of life in the hinterland by spillover effects.

It is important to remember that a primate city hierarchy measured by population or infrastructure and services, is but one of three basic urban rank-size patterns into which an urban system can evolve (Smith, 1982). A regular ranking (see Figure 1A) implies a linear continuum between urban size and rank-order on a logarithmic scale. This mature, normal distribution is represented by the rank-size rule of Zipf (1949) and is especially typical of Western industrial countries. Conversely, immature rank-order distributions can exhibit a concave curve (see Figure 1B) where there is a tendency towards primacy, or a convex curve (see Figure 1C) where middle-order centres are disproportionately large. The latter situation typically provides evidence for poor integration of various components of the urban system. However, a rank-size urban distribution is not feasible in sparsely-populated countries and a concave tail of small towns is an inevitable outcome in some situations.

The Colonial Milieu

Unevenly accelerated urbanization and urban primacy often arise from the substructure of a colonial past. Western European settlers initially developed urban settlements in colonized areas to function as administrative, military, mining, commercial, or port centres. Over the course of time, such locations became dominant primate centres. The local community and physical environment were parasitically exploited to the advantage of the colonial power, and very little development was achieved that benefited the indigenous population. In the primate city, this situation

led to the formation of distinct social classes and physical residential segregation. The high-status white colonists settled near the city core area, while colonized indigenous peoples were relegated to the less-desirable conditions of the peripheral zones. These dualistic colonial cities were characterized by an orderly and well-developed central city, structured according to Western standards, which stood in contrast to the traditional and disorderly morphology of the periphery, where infrastructural limitations, squatting, poverty, and other social problems prevailed and informal and bazaar-oriented commercial activities were generally found.

It must be emphasised that Third World urbanization demonstrates various other characteristics, especially when viewed within a political economy framework. However, the aim of this article must be interpreted within a positivist, deductive approach. Against the tripartite theoretical framework of Third World urbanization set out above, answers are sought to three questions about South West Africa/Namibia:

- First, how balanced has the spatio-temporal development of the national urban system been?
- Second, what is the nature and scope of Windhoek's primacy?
- Third, what contribution has the colonial substructure made to the internal urban morphology of Windhoek?

National Urban System of SWA/Namibia

Urban settlements are the foci of any community's economic, administrative, and socio-cultural activities. Under ideal conditions, a national urban system evolves over time and in space into a set of linked towns and cities with each area having a different rank size and appropriate function and location.

The uneven spatial distribution of urban settlements in SWA/Namibia (see Figure 2) is interpreted when viewed against the historical milieu of the origin of the settlements. Four factors in particular—availability of water, missionary activities, railway development, and natural resource exploitation—determined the founding and location of towns in the previous century (Barnard, 1964; Simon, 1982). In such a dry country it was obvious that the presence of a water source would play a decisive role in the location of a town. When the first missionaries set foot in the territory at the beginning of the nineteenth century, they established stations at fountain sites and laid the foundations of later towns that included Warmbad, Bethanien, Keetmanshoop, Rehoboth, Gobabis, Windhoek, Okahandja, and

Omaruru. Because of contact with South Africa, the historical evolution of settlements demonstrates a diffusion from the south.

After the inception of German colonial rule in 1884, some of these nodal mission stations were extended into full-fledged urban cores as military and administrative centres, as in the cases of Keetmanshoop, Okahandja, Omaruru, and Windhoek. At the same time, urban settlements began to appear in the northern territory with the founding of military centres at the foundatians at Grootfontein and Outjo. Windhoek, with its strategic central location and administrative function as the colonial capital, developed most vigorously, while Lüderitz, Swakopmund, and later Walvis Bay, served as ports for external trade. By the turn of the century, the colonial administration had started laying the country's railway network that eventually evolved into the present railway system with its prominent south-north orientation. Some settlements benefitted from being located along the railway, while other towns were passed by. The former settlements, together with new centres that developed along railway routes, grew satisfactorily, including Otjiwarongo, Usakos, Mariental, Keetmanshoop, and Karasburg.

Amid the urban evolution previously described, the territory's base of natural resources territory played a supplementary role in establishing the present function and economic base of towns. Mining towns like Tsumeb, Uis, Kombat, Rosh Pinah, and Oranjemund reflect the role of mineral exploitation in town formation. However, it is the agricultural economy that is the undergirding force of the greatest number of towns. Notwithstanding their disparate founding, these towns currently perform an essential central place function as market and service centres for rural farming communities in such sparsely-populated country. Due to the greater agricultural potential and population densities in the central and northern regions, the majority of towns are located in these areas. Approximately two-thirds of the country's 66 urban settlements are found in those areas, and they accommodate nearly 80% of the national urban population—unmistakably a spatially disproportionate pattern (see Figure 2).

This overall settlement pattern is the physical framework within which the country's urbanization process takes place. In 1981, the urban population of SWA/Namibia totalled about 290,000, representing an urbanization level of 28%. This seemingly low proportion of urban dwellers obtains an added dimension when it is disaggregated into different ethnic groups (see Table 1).

Given the high urbanization level of the 70,000 urban whites (87%) and their sharply decreased growth rate of 0.5% per year, it is clear that this group had already entered a saturation stage by 1981. It is not surprising that whites were first to move to the cities because they were the more

Table 1.
Urbanization In SWA/Nambia

Year	Whites		Blacks/Coloureds		Total	
	Level ¹	Rate ²	Level ¹	Rate ²	Level ¹	Rate ²
1936	40,3%		3,3%		9,8%	
1951	57,6%	5,8%	10,8%	5,3%	16,2%	5,5%
1970	73,8%	4,5%	18,4%	5,9%	24,9%	5,3%
1981	86,8%	0,5%	22,8%	5,4%	27,7%	3,9%

Source: Official SWA Population Censuses.

Notes: ¹Urban population as percentage of total rural and urban population.

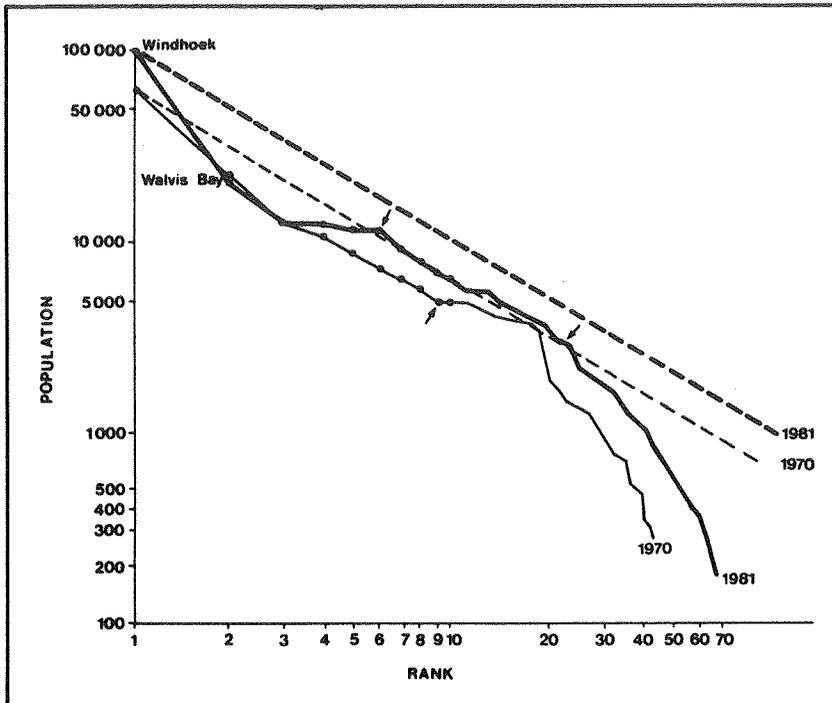
²Average annual growth rate between successive census years.

privileged group. On the other hand, the urbanization trends of the ten black and coloured ethnic groups are comparable to those of developing Third World countries—a low level of only 23% urban dwellers (numbering 220,000 in 1981), increasing at an accelerating growth rate of 5–6% a year. The removal of the discriminatory influx control that restricted settlement in white urban areas until 1977 may result in a dramatic increase in the urbanization level of the black and coloured population groups in the near future. If only the present urban growth rates of these groups is maintained, this group should triple its urbanized numbers by the year 2000. The urbanization potential of the vast number of people now still located in traditional rural areas will make great demands on the housing and employment capabilities of the general urban structure. The question is whether the urban hierarchical system of SWA/Namibia has evolved in such an effective and balanced way to be able to meet such demands.

An optimum urban hierarchy implies an integrated linking of towns and cities in pyramidal order, based on a specific criterion such as population size or number of functions. According to the rank-size rule (Zipf, 1949), a normal/mature system maintains a fine balance between settlements, in that a regular and linear continuum exists when population size and rank are graphically plotted on logarithmic scales (see Figure 1A). Similarly, a disproportionate concentration of people in certain settlements vs. lagging development in others is considered undesirable (see Figures 1B and 1C).

Interesting patterns emerge when a ranking of the SWA/Namibian urban settlements according to numbers of population is diagrammatically portrayed (see Figure 3). The dashed straight line shows the situation that would occur if the pattern developed according to the rank-size rule. Ostensibly, the urban system of SWA/Namibia is composed of different sub-systems that have become increasingly accentuated over time. In the 1970 rank-order curve, two patterns are recognizable—a more or less linear

Figure 3.
Urban Hierarchy of SWA/Namibia



tendency toward the apex and a convex configuration from rank 9 (Mariental) toward the nadir. By 1981, the ranking had assumed three definite subcomponents. Windhoek had gained a strong, dominant position giving rise to a curve that is concave toward the top of the graph—a typical primacy pattern in which the highest-order city is separated from other settlements by a large gap. Further, the rank-size relationship is linear downward from rank 6 (Tsumeb) and convex from rank 23 (Usakos). Rankings based on services have produced less similar results (South West Africa Administration, 1979). Although a normal straight-line relationship exists for middle-order towns, the total urban system shows evidence of overdevelopment of large towns and underdevelopment at lower levels. If the location of the latter group of towns is evaluated (see Figure 2), the spatial manifestation of poor development is in those areas removed from the central north-south axis.

The most significant feature that emerges from the foregoing discussion is the immature and unbalanced condition of the national urban system and its culmination in the overwhelming primacy of Windhoek. The next section of this article narrows this focus on the national picture to the role of the major core city.

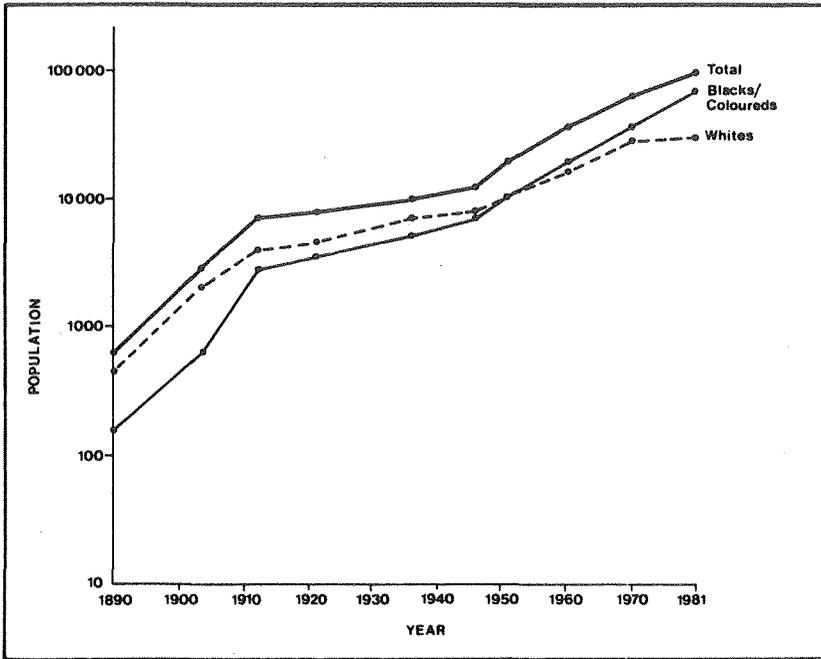
The Primacy Role of Windhoek

At present, Windhoek occupies a central position in SWA/Namibia in both spatial terms and in its politico-administrative, economic, population, and infrastructural functions. The city owes its origin to the presence of fountains, around which pre-colonial populating groups settled. Following a modest initial stage as a mission station established in 1842, this settlement gained urban status in 1890 when German colonial authorities developed it as the main military and administrative territorial centre. Its development since that time has been characterized by sustained population growth with definite, recognizable trends (see Figure 4). The strong growth rate during the German colonial period weakened after 1915 when South Africa took over territorial control. The two World Wars further slowed the process of urbanization, but the growth rate accelerated again after World War II, particularly as a result of the attraction the centre had for whites. Since 1970, the white growth rate has slackened markedly in contrast with a prominent increase in the growth rate of the black and coloured population groups.

The composite picture of Windhoek (see Figure 4) is one of a rapidly-growing capital city and national service centre. It dominates the SWA/Namibian urban scene, with 96,000 inhabitants (30% white and 70% black and coloured) in 1981. Table 2 shows that 9% of the country's total population, 33% of its urban population, and 42% of the white urban population is concentrated in Windhoek.

Against this background, it is necessary to use relevant criteria and techniques more closely to examine Windhoek's primacy features. A variety of techniques are available to measure a city's degree of dominance, the simplest being the size ratio between the population of the first and second-order centres. By this measure Windhoek was 4.7 times larger than the next town (Walvis Bay, with an 1981 population of 20,400). It is significant that this substantial gap is currently considerably wider than in 1970, when the ratio was 2.8 (see Table 2). However, comparison of only the two largest centres can be misleading. Use of a primacy index (El-Shakhs, 1972), which evaluates the population size of the highest order centre relative to all other centres in the urban system, produces a more accurate picture of primacy. Index values vary theoretically between zero (all urban popula-

Figure 4.
Windhoek Population Growth



tion concentrated in a single city). By these standards, SWA/Namibia's primacy index of 0,88 in 1981 (vs. 0,81 in 1970) must be regarded as very high (see Table 2). By comparison, the average index value for Third World countries is 0,78 and for Western developed countries is 0,70 (El-Shakhs, 1972). These two indexes reconfirm earlier observations based on the graphic rank-order distribution of the urban system (see Figure 3).

The nature of Windhoek's dominant role in the national economy and infrastructure appears clearly in Table 3. More than 40% of the national totals of each of the following activities or characteristics is concentrated in Windhoek: retail sales, wholesale establishments and sales, manufacturing establishments, post office staff and postal items handled, library members and book holdings, medical doctors, secondary and tertiary educational institutions, television sets, newspaper circulation, and motor vehicles. Moreover, the country's road, rail, and air routes all converge at Windhoek.

Table 3.
Windhoek's Primacy Role

	Characteristic	Ratio	Computational procedure
ECONOMIC	Economically active	19,6%	Employed workers as % of national total in 1981
	Unemployment	22,3%	Job-seekers as % of national total in 1981
	Retailing	25,5%	Retail establishments as % of national total in 1977
		45,9%	Retail sales as % of national total in 1977
	Wholesaling	65,8%	Wholesale establishments as % of national total in 1977
		60,7%	Wholesale sales as % of national total in 1977
Manufacturing	40,6%	Manufacturing establishments as % of national total in 1979	
COMMUNITY SERVICES	Police	38,5%	Police personnel as % of national total in 1981
	Postal	52,9%	Post office staff as % of national total in 1981
		64,8%	Postal items handled as % national total in 1981
	Library	49,9%	Library members as % of national total in 1981
		40,6%	Book holdings as % of national total in 1981
	Medical	20,6%	Hospital beds as % of national total in 1980
		45,8%	Medical doctors as % of national total in 1983
	Educational	40,5%	Secondary and tertiary institutions as % of national total in 1980
Water	25,6%	Water consumed as % of national urban consumption in 1975	
Electricity	18,8%	Electricity consumed as % of national total in 1981	
COMMUNICATION	Telephone	28,1%	Telephones as % of national total in 1981
	Radio	27,6%	Radio sets as % of national total in 1981
	Television	66,3%	Television sets as % of national total in 1981
	Newspapers	55,7%	Sales of daily newspapers as % of national total in 1981
	Motor vehicles	71,3	Motor vehicles as % of national total in 1981

The spatial manifestation of these primacy tendencies is portrayed cartographically in the *National Atlas of South West Africa* (Van der Merwe, J.H., 1983).

The overall picture that emerges is one of an unbalanced urban system in which Windhoek, according to all empirical evidence, is the primate city in terms of population numbers, economic activities, and infrastructure. The

marked lag of the other urban centres suggests that the primate core behaves parasitically rather than generatively on its national hinterland. The contribution made by the colonial background to this development pattern must not be underestimated; this is equally true when the internal morphological structure is viewed.

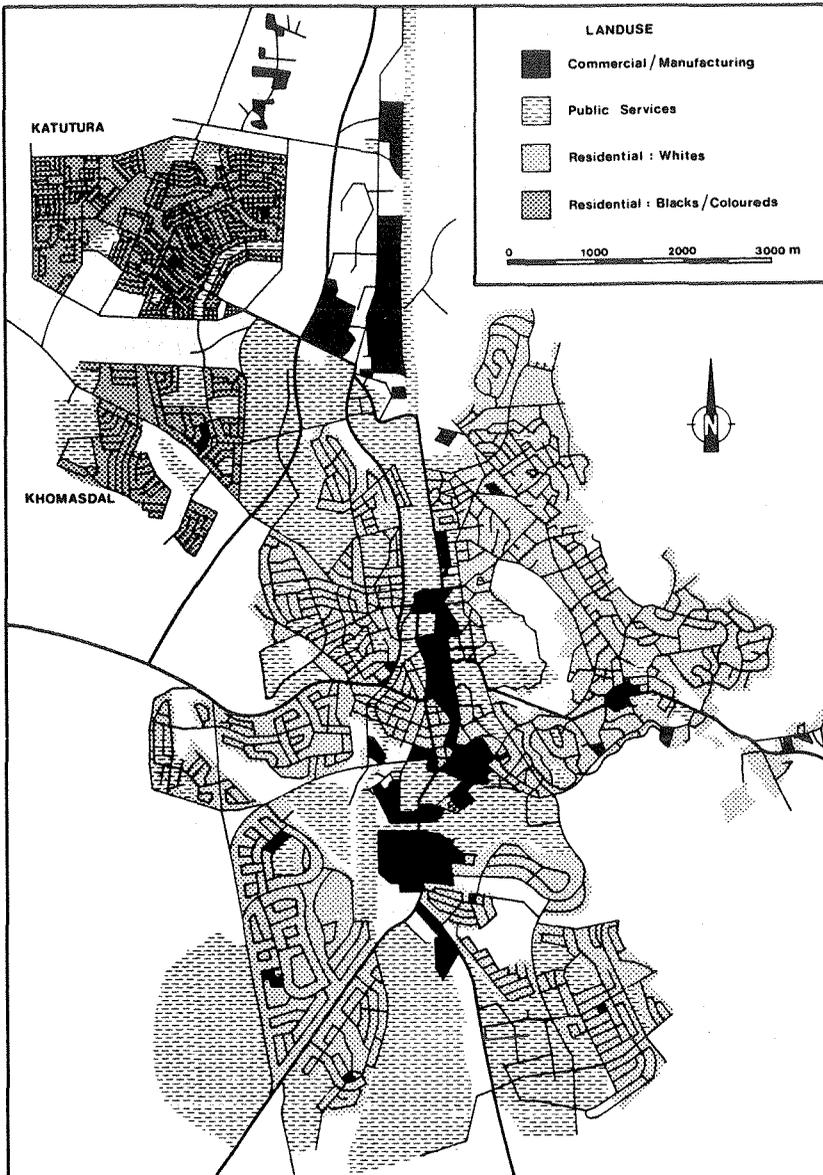
Colonial Milieu

The dualistic, colonial intraurban structure of Third World cities is clear in contemporary Windhoek (see Figure 5). The initial role of the Germans and the subsequent involvement of the South African government functioned as colonial instruments in helping to bring about this pattern (Simon, 1983). In general, the morphological layout of the city takes on a fairly linear pattern in the south-north oriented Windhoek Valley. Originally, the city developed according to the colonial policy of segregated residential areas based on socio-ethnic stratification. The South African government continued to build on this segregated base and in the 1950s formalized it through apartheid. Although these discriminatory measures were officially removed in 1979, the modern urban structure still bears the imprint of ethnic segregation—dense mass housing in Katutura (black) and Khomasdal (coloured) in the northwestern peripheral sector, while high-status whites occupy the low housing density central and southern areas of the city. Contrary to the usual colonial urban norm of an irregular street layout for the low-status indigents on the periphery, it is the central white area of Windhoek that has a more irregular street pattern. Physical site constraints are the cause of this anomaly: the street pattern in white areas is the product of irregular adaptation to the hilly terrain, whereas the present black and coloured residential areas were planned in the post-German period on flat terrain.

A surprising feature in this Third World context is the absence of squatter housing in and around Windhoek. Such absence can probably be explained by the effective application of controls against shanty structures in a relatively small city. However, the authorities are powerless to prevent the camouflaged squatting that commonly takes place in the form of overpopulation of existing legal housing. Another factor contributing to the lack of squatting is that in the past the attraction of the city and the push-effect of rural areas were probably not strong enough to cause the demand for housing to far exceed the supply. The situation can be expected to change dramatically as migration increases in the future.

The strong administrative function of the primate city, which began under colonial rule and has continued to the present, is observable in Figure 5 in the relatively large area given over to public land uses (e.g.

Figure 5.
Morphological Structure of Windhoek



government buildings, education, and recreation). Together with manufacturing and commercial activities, public service areas form a prominent central axis in the city's morphological structure. The manufacturing component is, however, not well-developed; this situation can have a detrimental effect on the city's economic base and its ability to provide future employment, especially if the present influx of rural migrants continues. The meagre natural resource base, the relatively small market with low buying power, and the political instability of the territory are factors not conducive to large-scale industrialization.

Other German colonial relics are manifest in the city's architecture and cultural life. The distinctive German continental building style of the older central area, alternated with more modern buildings, creates another urban morphological image that incorporates traits of Western European urban structure into a Third World fabric. Additionally, 7% of Windhoek's total population (23.6% of whites) are speaking German, confirming the city's colonial past.

Although less prominent than in the primate city, the internal morphological structure of other SWA/Namibian urban centres manifests a similar colonial base.

Summary and Future Perspective

The objective of this article was to evaluate the SWA/Namibian urban system within a tripartite, theoretical Third World urbanization framework. The preceding analysis has indicated that the urban system has developed in a heavily unbalanced manner over time, in space, and ethnically. The black population is currently experiencing accelerating urbanization, while Windhoek—the primate city—overwhelmingly dominates the country's other urban centres in population, economics, administration, and infrastructure. The country's colonial past is partly responsible for the present unsatisfactory state of affairs, as well as for the imprint left on the internal morphology of the urban structure. Thus, Windhoek is an amalgam of Third World colonial and Western European urban structures.

It is necessary to ask whether these trends should be allowed to continue unabated? As a nation currently undergoing social and economic development, the full impacts of the natural and unavoidable urbanization process have yet to be experienced by SWA/Namibia. The inevitable internal urban problems peculiar to Western cities must be anticipated. The complexity of the phenomenon of urbanization demands that further research be undertaken to assist decision makers.

It is already clear, however, that the present dominant, parasitic primacy

role of Windhoek must be restructured to produce a more evenly-balanced national rank-size system. The wide gap between Windhoek and the next four largest centres must be narrowed by stimulating the latter towns without reducing the scale of Windhoek in the process. However, even the city's present 96,000 persons is hardly of a size to generate extensive agglomeration economies to benefit the country as a whole. Further, the next four centres will have to become more evenly deconcentrated in their spatial locations—possibly by artificially stimulating Keetmanshoop in the south, Otjiwarongo and Oshakati in the north, and Walvis Bay in the west, to position them as second-tier major towns by using strong doses of state-provided development aid. Notwithstanding political-administrative arguments, the functional role of Walvis Bay in the urban system of SWA/Namibia is one of great importance. Also, in such an extensive and sparsely populated country, even the declining small towns fulfill an important function in supplying the more basic needs of their inhabitants. The national space economy and regional development are also dependent on such towns.

A national urbanization strategy, based on the results of empirical research, should allocate a proper and meaningful role to each urban settlement. The prescription of definitive urban development strategies and corrective measures does not seem feasible, however, until an internationally-acceptable political-administrative settlement has brought stability to the country. With apartheid measures almost completely removed in the present transitional SWA/Namibia, urban processes and structures may now respond more naturally. This freedom may lead to a more socially and economically integrated Windhoek that towers even larger in the primate hierarchical pattern. Undoubtedly, the control of the urban system will provide immense challenges and make high demands on urban geographers, planners, and governmental authorities.

Note

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References

- Barnard, W. S. 1964. *Die Streekpatrone Van Suidwes-Afrika*. Ph.D. diss., University of Stellenbosch.
- Brutzkus, E. 1973. Centralized versus Decentralized Pattern of Urbanization in

- Developing Countries. *Tijdschrift voor Economische en Sociale Geografie* 64, pp. 11-23.
- Dwyer, D. J. 1974. *The City in the Third World*. New York: Barnes & Noble.
- El-Shakhs, S. 1972. Development, Primacy and Systems of Cities. *Journal of Developing Areas* 7, pp. 11-36.
- Ettlinger, N. 1984. A Note on Rank-Size and Primacy: In Pursuit of a Parsimonious Explanation. *Urban Studies* 21, pp. 195-97.
- Hoselitz, F. 1955. Generative and Parasitic Cities. *Economic Development and Cultural Change* 3, pp. 278-94.
- Jefferson, M. 1939. The Law of the Primate City. *Geographical Review* 29, pp. 226-32.
- Lemon, A. 1977. Urban Primacy and Regional Economic Development in the Third World. *Proceedings of the Geographical Association of Rhodesia* 10, pp. 3-14.
- London, B. 1977. Is the Primate City Parasitic? The Regional Implications of National Decision Making in Thailand. *Journal of Developing Areas* 12, pp. 49-68.
- Linsky, A. S. 1965. Some Generalizations Concerning Primate Cities. *Annals of the Association of American Geographers* 55, pp. 506-13.
- Mehta, S. K. 1964. Some Demographic and Economic Correlates of Primate Cities: A Case for Reevaluation. *Demography* 1, pp. 136-47.
- O'Connor, A. 1983. *The African City*. London: Hutchinson Univ. Library for Africa.
- Simon, D. 1982. Recent Trends in Namibian Urbanization. *Tijdschrift voor Economische en Sociale Geografie* 72, pp. 237-49.
- Simon, D. 1983. The Evolution of Windhoek. In *Perspectives on Namibia: Past and Present*, edited by C. Saunders. pp. 83-108. Centre for African Studies, Cape Town: Univ. of Cape Town Occasional Paper no. 4.
- Smith, C. A. 1982. Modern and Premodern Urban Primacy. *Comparative Urban Research* 9, pp. 79-96.
- South West Africa Administration. 1979. *Sentrale plekstudie vir SWA, 1976*. Windhoek: Planning Division.
- Van der Merwe, I. J. 1983. *Die stad en sy omgewing*. Stellenbosch: University Publishers.
- Van der Merwe, J. H., ed. 1983. *National Atlas of South West Africa*. Windhoek: Directorate Development Co-ordination, SWA
- Zipf, G. K. 1949. *Human Behavior and the Principle of Least Effort*. Cambridge: Addison-Wesley Press.