



Linguistic segregation in urban South Africa, 1996

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Abstract

South Africa is a multi-lingual country with 11 official languages and a recent history where language was frequently used as a political instrument, notably in the urban areas. Although the cities were initially colonial foundations, as a consequence of rural-urban migration, the speakers of the various national languages have come into close contact with one another. However, as a result of the inheritance of apartheid town planning and its emphasis on racial zoning, residential segregation levels between some linguistic groups have been extremely high. An analysis of the 1996 census results reveals that the uniformly high segregation levels between the speakers of indigenous African languages and the speakers of Afrikaans and English are the direct outcome of apartheid era town planning. Nevertheless, segregation between the speakers of different African languages may also on occasion be relatively high where homeland political policies were pursued, although this was the exception rather than the rule. Similarly segregation between English and Afrikaans speakers was locally high where home language coincided with former racial classification. Few immediate significant changes are anticipated in the present patterns of linguistic segregation, as the inherited apartheid city structure is proving to be remarkably resistant to transformation.

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1. Introduction

In the second half of the 20th century South African cities were subjected to apartheid social engineering and legally enforced racial segregation was pursued with the object of entrenching White minority rule (Christopher, 2001a; Davies, 1981, 1996; Lemon, 1991; Robinson, 1996; Smith, 1992; Western, 1996). The legacy of this policy was still powerfully in evidence at the time of the 1996 population census, which demonstrated the continuing high levels of racial segregation in the urban areas of South Africa (Christopher, 2001b). One of the consequences of apartheid policies was the evolution of linguistic segregation, where race or population group and language group were often coincident (van der Merwe, 1993, 1995). With the repeal of the laws enforcing racially defined residential restrictions, the imprint of linguistic segregation remains, presenting significant problems for national integration. The entrenchment of 11 official languages in the South African

constitution is indicative of the importance attached to the issue of linguistic identity by the national government (African National Congress, 1994). It is in the towns and cities that contact between linguistic groups is most intense, and although reinforcing apartheid in some aspects, it also demonstrates a vital aspect of integration and tolerance which is instructive for the present era of nation-building. This is particularly significant in view of the importance of the politically imposed language usage at schools in sparking the 1976 Soweto student riots (Bonner and Segal, 1998).

It is proposed to examine the degree of residential segregation between language groups in South African cities. First, the extent of spatial separation between the speakers of indigenous and non-indigenous languages is explored. This distinction closely corresponds with the most significant legal division within the apartheid city; namely that between Africans and non-Africans. Secondly, the Afrikaans–English dichotomy is presented, which on occasion reflected the racial classification of the population. Thirdly, segregation between the speakers of indigenous African languages is examined, where segregation was enforced on a piecemeal basis in pursuit of the grand apartheid programme, centred upon the

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political exclusion of the homelands and their inhabitants from the South African state.

2. Linguistic patterns

The population of South Africa speaks a wide variety of languages. Eleven have been granted official status and are recorded in the census returns (South Africa, 1999a) (Table 1). Two, English and Afrikaans, held official status prior to 1994 and may be regarded as European or European-derived languages associated with the previous White controlling elite. The other nine are African languages formally systematised from the speech of the indigenous peoples of the country. In common with many countries a large number of people are multi-lingual, using different languages for different purposes, notably in education, government, commerce, the home, and socially outside the home (Laitin, 1992). The exact phraseology of the census questionnaire thus assumes a high degree of significance in influencing the response (Arel, 2002). The 1996 census recorded only 'first home language', forcing people to choose which they wished to have recorded against their name, drawn from a list of the 11 official languages and 'others'. It is notable that the 1996 census was the first to pose a uniform language question for the entire population regardless of race.¹

The constant political equation of language with the concept of the nation, both in Europe and in South Africa under apartheid, has made the issue of language identity highly contentious (Williams, 1994). However, other multi-lingual countries, including India with its great linguistic diversity, have avoided the destructive characteristics of linguistic nationalism, through the promotion of a sense of unity, without the creation of exclusive ethnic homelands (India, 1955). The government of South Africa is seeking to do the same in the post-1994 era, through recognition and the creation of an all-embracing national identity, independent of language. This task is to be supported by the Pan South African Language Board, which is responsible for the development of the country's languages on the basis of equal treatment and the promotion of multilingualism (Maartens, 1998). The development and prom-

Table 1
Languages of the urban population of South Africa 1996

Language	Number of speakers in urban areas	Urbanised (%)
Afrikaans	4,880,923	84.0
English	3,329,501	96.2
IsiNdebele	215,964	36.8
IsiXhosa	3,201,998	44.5
IsiZulu	4,125,981	44.8
Sepedi	1,007,444	27.3
Sesotho	2,152,854	65.2
SiSwati	283,172	27.9
Setswana	1,508,360	45.7
Tshivenda	159427	18.2
Xitsonga	527,878	30.1
Other/unspecified	388,308	66.5
Total	21,781,808	53.7

Source: (South Africa, 1999a).

tion of the African indigenous languages has been viewed as an essential part of the nation-building programme based on cultural diversity (Alexander, 1997). Indeed it has been suggested that unless such policies are actively pursued 'There is a real danger that a language faultline will displace the racial faultline... to demarcate an unbridgeable gulf between those who are "in" and those who are "out"' (Alexander, 2002, p. 96).

Indigenous African languages may be grouped into three broad 'sub-families', Nguni, Sotho and 'Others', which are closely related members of the South-Eastern Bantu linguistic family (Greenberg, 1970; Jordan, 1973). The Nguni sub-family includes IsiXhosa, IsiZulu, SiSwati and IsiNdebele, which share many broad grammatical features and word roots. The same applies to the Sotho sub-family of Sesotho, Sepedi and Setswana. Within the broad sub-families there is a fair degree of mutual intelligibility. Some differences, such as those between SiSwati and IsiZulu are relatively slight so that the latter is taught in schools in Swaziland. The 'Others' are Tshivenda and Xitsonga, whose relationships are more tenuous and belong to linguistic sub-families whose members reside mainly outside South Africa's borders. The close relationship between adjacent language groups, together with regional dialects often make the precise identification of a spoken language difficult (Magi, 1990). Indeed it is possible that census enumerators might discern or enter the language expected or politically required, while those subject to enumeration might offer the answers which they thought would be most acceptable to the government enumerators. In both cases the results will be unrepresentative and the inaccuracy virtually impossible to detect.

The two major non-indigenous languages in South Africa are English and Afrikaans. Afrikaans is derived from Dutch, although it has evolved, through physical isolation and the incorporation of a large number of

¹ It is a measure of official priorities that race has been the subject of census inquiry since the conduct of the first scientific enumeration in the Cape Colony in 1865. A question on ability to speak the two official languages was introduced only in 1918 and then for Whites only. A question on home language was introduced in 1936, although only extended to the entire population in 1946. It should be noted that no Afrikaans or English options were afforded African respondents nor African languages for the White, Coloured and Asian respondents (South Africa, 1954).

words and grammatical forms from a variety of European, African and Asian languages, into a separate written and spoken language (Ponelis, 1993). It could therefore technically be claimed to be indigenous to Africa. These are the languages of the colonial powers and their settlers and descendants, although the small numbers of surviving indigenous Khoisan peoples of the western part of the country adopted Afrikaans, leading to the virtual extinction of their own languages (Crawhall, 1999). Another significant language shift has been the suppression of Indian languages by English, and to a far lesser extent Afrikaans, in the Indian community in the course of the 20th century (Prabhakaran, 1998).

Prior to urbanisation, the indigenous linguistic groups in South Africa were regionally based in their distribution (Moseley and Asher, 1994). The urban areas were largely established in the colonial era and served the administrative and commercial interests of the White population. They therefore housed the main concentrations of English- and Afrikaans-speakers. However, the urbanisation of the indigenous population resulted in substantial changes with large-scale migration to the towns, particularly in the late 19th and 20th centuries. The towns increasingly have come to reflect the linguistic patterns of the neighbouring rural areas. A notable exception was the Gauteng industrial region, which attracted people from all over the sub-continent, thus creating a multi-lingual urban complex (van der Merwe and van Niekerk, 1994).

Furthermore, although 88.6% of Afrikaans- and English-speakers in South Africa were urbanised by 1996, only 42.9% of indigenous language speakers were resident in the towns. The potential for substantial changes in linguistic ratios in the future is evident as the urbanisation of the African population proceeds and the African proportion of the urban population increases. This may be gauged from the position of the largest linguistic group, the IsiZulu-speaking population. In 1970 when only 30.9% of IsiZulu-speakers resided in urban areas, they comprised 12.1% of the urban population (South Africa, 1973). As a result of rural–urban migration, in 1996 some 44.8% resided in the formal urban areas when they constituted 18.9% of the urban population.² The ratio of indigenous to non-indigenous language speakers was further modified as a consequence of the reduction of the White population between 1991 and 1996. The combined urban total of English and Afrikaans speakers thus remained constant at approximately 8.2 million, while

the speakers of indigenous languages increased by approximately 10% in the same period (South Africa, 1992).³

The cities thus became areas of linguistic complexity and also of rapid evolution and assimilation (Calteaux, 1996). The international and national dominance of English in the fields of business, higher education and administration has been reflected in the widespread adoption of English in primary, secondary and tertiary education in Anglophone Africa (Mazrui, 2002). The result has run counter to South African official language policies as

It would seem that modernisation in South Africa, and the inexorable urbanisation in particular, is undermining the possibilities for the first alternative (that is promoting additive bilingualism) and that the more realistic option is a straight for English approach except in linguistically homogeneous classes where there is little exposure to English outside the classroom or where parents expressly request an alternative (South Africa, 1999b, p. 23).

So far this process has not produced a significant language shift at household level, although the possibility exists and is being resisted in official circles through the active promotion of indigenous languages at school (Brown, 1998; McDermott, 1998).

In an age when the racial classification system has been rejected by many census authorities, home language remains a significant social and cultural marker (Mohanty and Momin, 1996). Indeed language may be a key signifier in South Africa for the concept of ‘origins’, which has been identified as more meaningful for the popular understanding of American diversity, than ‘race’ in the United States census (Hirschman et al., 2000). The same may become true in post-apartheid South Africa. Segregation between linguistic groups may therefore provide a measure of national integration parallel with the (still) required racial classification. In order to assess the significance of linguistic separation in the urban areas, it is proposed to examine the degree of segregation between the speakers of indigenous and non-indigenous languages, and then

² The census definition of an urban area was dependent upon its administrative status. Thus considerable numbers of people who were functionally part of the urban areas, but lived in nominally rural areas, have been excluded from this discussion.

³ South African census statistics are subject to severe limitations. Between 1976 and 1994 the ‘independent’ homelands of Bophuthatswana, Ciskei, Transkei and Venda were responsible for the collection of data, including the conduct of censuses. The results were conflicting and the household questionnaires differed from those in South Africa. In 1991, Bophuthatswana (1991), Transkei (1994) and Venda (1993) conducted their own censuses. The disturbed political situation in Ciskei (1988) prevented the conduct of a census, and reliance must be placed upon estimates and projections.

the extent of segregation within these two broad groupings.

3. Measuring segregation

The standard index of dissimilarity as devised by Duncan and Duncan (1955) has been adopted to distinguish spatial segregation levels between linguistic groups. The index's ease of calculation and broad comparability have resulted in its widespread use, despite its limitations (Brun and Rhein, 1994; Christopher, 1992a,b; Frey and Farley, 1996; Massey and Denton, 1988; Telles, 1992; White, 1986). The index is calculated by comparing the spatial distribution of two population groups within a town. The index of dissimilarity is calculated according to the following formula:

$$ID_{xy} = 0.5 \sum |x_i - y_i|$$

where x_i represents the percentage of the X population in the i th census tract, y_i represents the percentage of the Y population in the i th census tract, and ID_{xy} represents the index of dissimilarity between the spatial distribution of the X and Y populations.

The index of dissimilarity is measured on a scale from 0 (identical distribution) to 100 (completely segregated). In the interpretation of the results, Kantrowitz (1969) suggested that indices of under 30 represented completely random numbers and therefore populations which could be regarded as integrated, while indices above 70 represented a recognisable degree of structural or legally enforced segregation. Values between 30 and 70 may indicate voluntary 'social' segregation between two identifiable groups without the intervention of legalised coercion. It is an illustration of the impact of racially defined apartheid that the median index of dissimilarity between Africans and Whites in South African towns increased from 78 in 1951 to 95 in 1991. This level represents 'hyper-segregation' resulting from highly coercive legal enforcement, from which South Africa is now emerging (Massey and Denton, 1993). Indeed, in the present discussion, it is proposed that an index value of 90 or over might be recognised as an indicator of 'hyper-segregation'.

Census returns at enumeration tract level for the urban areas of the country were acquired from Statistics South Africa, which conducted the national population census in October 1996. The urban census enumeration tracts, on average, housed 481 people. The statistics were analysed for the urban areas on the basis of the magisterial districts, except where metropolitan or physical urban areas were divided between two or more districts. Thus district statistics for the larger metropolitan areas such as Johannesburg, Pretoria, Durban

and Cape Town were grouped together for purposes of calculation. In addition a number of centres such as Pietersburg and Sheshego (Northern Province) and King Williams Town and Zwelitsha (Eastern Cape) were reunited.⁴ In these cases district boundaries had been drawn by the former government to excise the African suburbs from the remainder of the town, in order to place them under the administrative and political control of the former homeland governments. However, provincial boundaries have been respected in the analysis. Thus the population displaced from Pretoria to neighbouring Bophuthatswana has been included in the North West Province, not Gauteng (Gervais-Lambony and Guillaume, 1999).

Some numerical constraints were introduced into the calculations. Towns with under 5000 inhabitants were excluded from the investigations. Similarly language groups with less than 100 members or one percent of the population, whichever was the greater, were also excluded. In common with other studies, it was considered that the inclusion of small towns and communities might have exerted an erratic bias on the findings (Farley and Frey, 1994). A total of 249 separate urban towns and cities were therefore included in the study.

3.1. Indigenous/non-indigenous

African residential locations or townships had been established by the government since colonial times and residence in them legally prescribed prior to the enactment of apartheid laws in the 1950s. Thus in many urban areas the segregation of indigenous Africans from the remainder of the population had been official policy for 100–150 years prior to the repeal of such discriminatory laws in 1991. Even the numbers of resident African domestic workers in the designated White areas were strictly controlled (Mather, 1987). However, there were occasional survivals, where integrated communities were 'forgotten' by the town planners, but the numbers involved were very small (Maharaj, 1999). By 1991 only approximately 7% of the urban population of South Africa lived outside their designated racially defined zones, mostly in the White group areas as domestic servants and workers. Thus the legal enforcement of residential segregation, which was of fundamental importance in the evolution of South African cities, resulted in the effective spatial separation between the members of the indigenous and non-indigenous language groups, although that was not the specific intent of the policies.

⁴ Northern Province was subsequently (2002) renamed Limpopo Province. The names of some of the metropolitan areas and municipalities were also changed in 2002. The original nomenclature used in the census has been retained.

Furthermore, in spite of the long history of interpersonal contact between members of the two communities, linguistic assimilation was comparatively rare. Thus few Africans adopted English or Afrikaans as their home languages, notwithstanding their status as official languages and their utility in business and government. Similarly few Coloured, Indian or White families adopted the use of indigenous languages in the home. Consequently in the urban areas only 0.2% of the urban Coloured, Indian and White populations returned an indigenous language as 'first home language', while only 2.0% of urban Africans recorded English or Afrikaans as theirs (South Africa, 1999a).⁵ Such a high coincidence of language with racial or population group means that this index is thus a measure of the effectiveness of apartheid planning and its continuing legacy in the post-apartheid era. As might be anticipated, linguistic segregation between indigenous and non-indigenous language speakers was of a similar level to that recorded between Africans and non-Africans. The development of the dominant language of public record, English, as a home-based lingua franca among the population as a whole is not imminent.

It should be noted that there were some 35 urban areas with populations over 5000 inhabitants, which lacked either an indigenous or non-indigenous language speaking group of more than 100 people or one percent of the total. These towns were situated either in one of the three Cape provinces, where African language speakers were often present only in small numbers, or in the former African homelands where English and Afrikaans speakers were similarly not present in significant numbers. In the majority of cases such towns were effectively mono-lingual. Thus in the following section a total of 214 urban areas were included in the analysis (Fig. 1).

With few exceptions the indices recorded were exceptionally high, indicating the extensive occurrence of hypersegregation (Table 2). The national median index was 91 and three-quarters of all values were contained within the range 65–97. None of the indices were below 30, and so ascribable to purely random numbers and integrated populations. Furthermore, the degree of segregation was fairly uniform across the country with little regional variation. Only in the Free State was the level of dissimilarity between the two groups statistically significantly higher than in the other provinces.⁶ This reflects the inherited legacy of systematic segregation in that province, dating back to the 19th century, which was a feature of previous censuses throughout the 20th

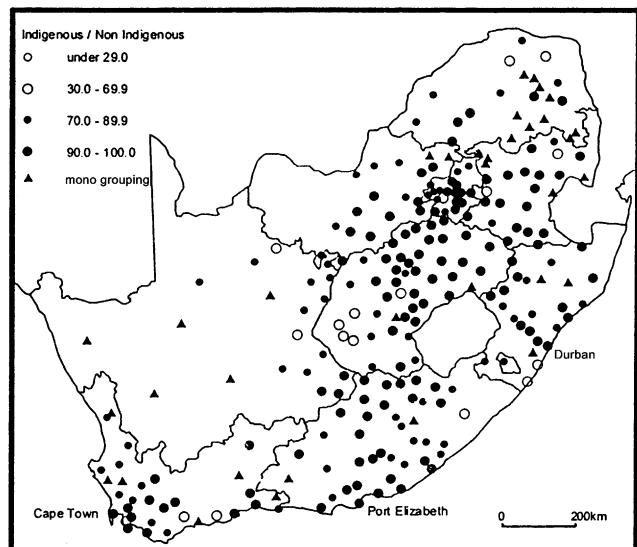


Fig. 1. Indices of dissimilarity between indigenous and non-indigenous language speakers.

Table 2
Median provincial indices of dissimilarity by language groups 1996

Province	Indigenous/ non-indige- nous	Afrikaans/ English	Largest indige- nous/second indigenous
Western Cape	91	62	_a
Eastern Cape	91	63	_a
Northern Cape	79	_a	_a
Free State	94	26	25
KwaZulu-Natal	91	49	66
North West	91	45	41
Gauteng	91	39	38
Mpumalanga	92	38	40
Northern	92	43	40
SOUTH AFRICA	91	51	37

Source: Calculated by the author from statistics supplied by Statistics South Africa.

^a Under five towns.

century (Christopher, 1990, 1994). It should also be noted that there was no significant relationship between segregation level and the size of the town.⁷ The administrations of small towns had been just as effective in imposing the apartheid city model upon their populations as those in the large cities. However, segregation levels did increase significantly with the ratio between indigenous and non-indigenous language speakers. Thus the higher the proportion of indigenous language speakers, the higher the index of dissimilarity.

⁵ Some 2.0% of the urban African population was born outside South Africa.

⁶ The Mann-Whitney *U* test for significance was adopted for comparisons between the index levels in different provinces.

⁷ Spearman's rank correlation coefficient was adopted for these calculations.

The high dissimilarity index values between the indigenous and non-indigenous language speakers are indicative of the continuing spatial separation between Africans and other population groups and the absence of a significant community language shift. The consequences of post-apartheid political developments have had comparatively little impact upon the basic structure of South African towns and cities. Limited integration has been noted as mortgage finance was extended to African families wishing to purchase property in the former White areas (Kotze and Donaldson, 1998). In addition the central areas, notably the high rise apartment blocks, in a number of towns and cities have been occupied by Africans, but with the effect of converting a formerly White group area into an African ghetto or ethnic village (Guillaume, 2001). Land invasions and resettlements, although disrupting the broad apartheid sectoral racial zoning plan, have usually produced highly segregated settlements (Gigaba and Maharaj, 1996; Oelofse and Dodson, 1997; Saff, 1996). Furthermore, formally planned housing schemes have had little different result, perpetuating racially segregated suburbs (Bremner, 2000). There have been exceptions, notably on the Cape Flats (Oldfield, 2000). Land restitution programmes have been limited in scale and have not succeeded in reestablishing pre-apartheid integrated communities (Popke, 2000). The vibrancy and vitality of African township cultures similarly suggest that there is no concerted desire to abandon them, even if the extreme poverty of the majority of the inhabitants were to be alleviated (Houssay-Holzschuch, 1999). As a result there appears to be a sustained programme to rehabilitate and upgrade living conditions in the townships, with all the implications for continued segregation that this implies (Harrison et al., 1997). In similar vein, the construction of the gated White suburb, with its walls, electrified fences and security guards, represented the most visible defence of the apartheid inheritance and the maintenance of the status quo (Hook and Vrdoljak, 2002).

After the election of the new democratic, but economically non-interventionist, government in 1994, there was no concerted, government-driven, programme aimed at racial and ethnic integration and the deliberate construction of a post-apartheid city (Bond, 2000). This maybe parallels the political debate over the desirability of cultural and linguistic assimilation as opposed to social pluralism (Ratcliffe, 1996, p. 301). Indeed the overwhelming poverty of the African population is likely to inhibit integration, producing cities segregated by income level, which closely reflected language and ethnicity as identified in Mexico and Brazil (de Fuentes and Perez Medina, 1998; Telles, 1995). Such an outcome may be liable to some modification in the face of White emigration, particularly if it were to become similar in scale to that experienced by Zimbabwe after 1980 or Algeria in 1962 (Cumming, 1993; Eichler, 1977).

3.2. Afrikaans/English

Segregation between English and Afrikaans speakers was never formalised under apartheid as the two languages were spoken predominantly by the White, Coloured and Indian population groups, who were, however, segregated from one another under the Group Areas Act (1950). It should be noted that the three groups differed substantially in their linguistic composition, with 78.9% of urban Coloured people returning Afrikaans as their first home language, but only 1.4% of urban Indians doing so in 1996 (South Africa, 1999a). The White population was more evenly balanced with 55.9% returned as speaking Afrikaans and 40.4% speaking English. An earlier study had demonstrated relatively low levels of segregation between the two language groups within the White community (van Bergen and Olivier, 1983).

Marked regional variations in distribution of the two groups were evident so that only in 147 towns was it possible to calculate an index between them (Fig. 2). A total of 102 towns were therefore excluded as the numbers of one or other group were either under 100 or one percent of the total population. Afrikaans was dominant among non-indigenous language users in most urban areas outside KwaZulu-Natal, where English dominated to the virtual exclusion of the other language.

Segregation levels were substantially lower than those between indigenous and non-indigenous language speakers. The national median index value was only 51. Indeed in 24 urban areas the index was below 30, indicating random numbers and hence effective integration between the two groups. However, some 19 towns recorded indices above 70, indicating a high degree of

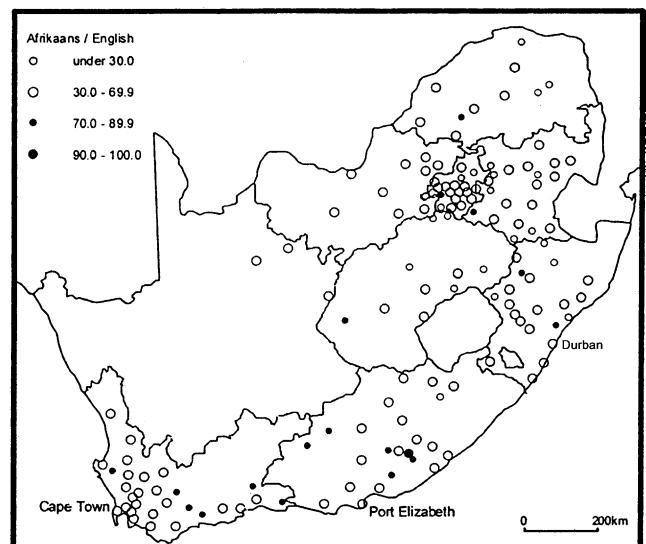


Fig. 2. Indices of dissimilarity between English and Afrikaans speakers.

structural segregation. In these cases the continuing effects of the previously legally enforced segregation between the Coloured, Indian and White populations was in evidence, where the dominant languages within these groups were different. For example, in the Albany district (Eastern Cape) the disparity between the two groups was particularly marked and may be ascribed to the different language profiles of the three population groups. Thus although 98% of non-indigenous language speakers in the former Coloured group areas spoke Afrikaans, only 23% of non-indigenous language speakers in the former White and Indian group areas did so. The result was a high degree of segregation between the two language groups as a direct result of the coincidence of race and language within a system of racially based segregation. Although the overall index of dissimilarity between Afrikaans and English speakers in the Albany district was at coercive levels (78), within the former White and Indian group areas, levels were substantially lower (58 and 52 respectively).

Furthermore, there was no significant difference between segregation levels according to size of urban area or size of the combined Afrikaans and English speaking groups. However, there was a significant relationship between the relative sizes of the two groups, both to one another and in relationship to the remainder of the population. Thus, the more evenly balanced the English and Afrikaans speaking groups, the greater the degree of integration, while increasing dominance by one group resulted in increasing levels of segregation. In addition there was a significant positive relationship between the combined percentage of Afrikaans and English speakers in the total urban population and the level of segregation.

The legacy of the apartheid city was well illustrated in Port Elizabeth, where the residential distribution of the population in 1996 still conformed closely to the former racial zoning patterns (Fig. 3). The extremely high index of dissimilarity (96) between the indigenous, predominantly IsiXhosa-speaking, population and the remainder was immediately apparent. This reflected the long history of African segregation in the city and the spatial coincidence of IsiXhosa-speaking population with the former African zoned suburbs. Within the former White, Coloured and Indian suburbs, there was a more complex pattern, reflecting the dominant position of English among the Indian, and to a lesser extent the White, populations and Afrikaans among the Coloured population. Thus the index of dissimilarity value in Port Elizabeth as a whole between Afrikaans and English speakers was calculated to be 61. However, within the former Indian and White group areas the indices were substantially lower (Table 3). The contrasting higher levels in the former Coloured group area were attributable in part to differential levels of education and income between the two language groups.

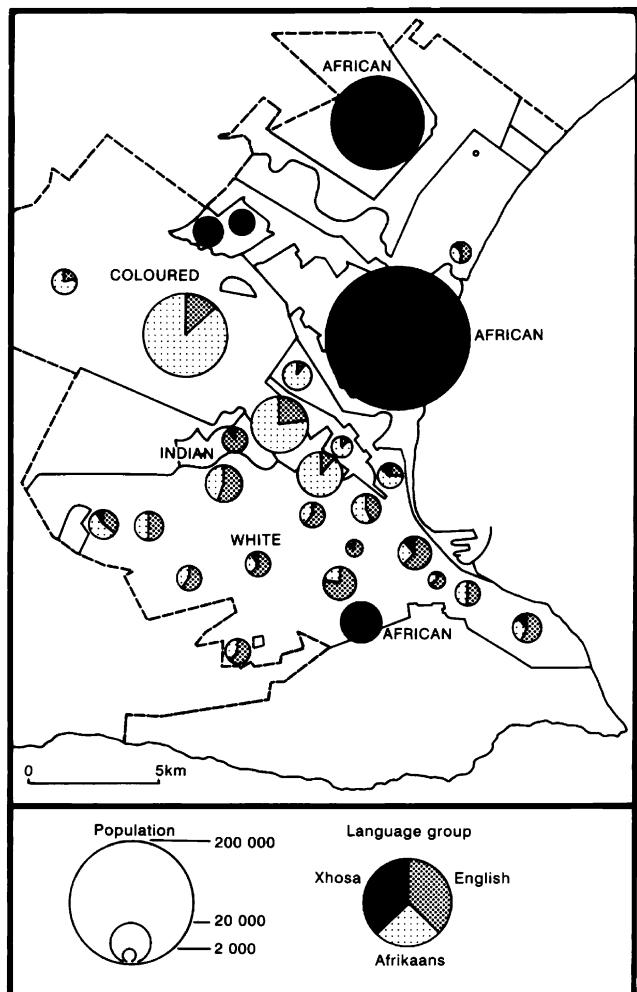


Fig. 3. Distribution of IsiXhosa, English and Afrikaans speakers, Port Elizabeth.

Table 3
English and Afrikaans speaking population of Port Elizabeth

Former group area	Afrikaans speakers	English speakers	Index of dissimilarity
Coloured	148,163	24,141	61
Indian	378	6567	29
White	65,486	76,314	37
Port Elizabeth	217,485	108,356	61

Source: Statistics South Africa, Population Census 1996, Language tables: Port Elizabeth.

3.3. African language groups

In only 136 urban areas was it possible to calculate indices for the different distributions of the two largest African language groups, where both exceeded one percent of the total population (Fig. 4). Thus 113 towns were excluded, mainly for lack of a numerically significant second indigenous language group. It should be noted that the majority of the towns in the coastal

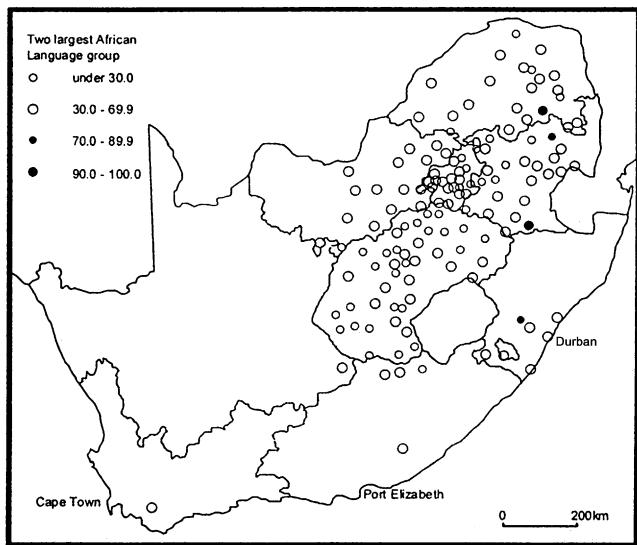


Fig. 4. Indices of dissimilarity between the two largest indigenous linguistic groups.

provinces were excluded, as either IsiXhosa or IsiZulu was so dominant that the members of no other African language group exceeded one percent of the population. This phenomenon is illustrated by the Cape Town metropolis where the census recorded 543 190 IsiXhosa speakers, while the next largest group, Sesotho, recorded only 3587 speakers.

Again segregation levels were comparatively low, with a national median value of 37. Indeed some 32.4% of towns recorded indices below 30, indicating the purely random distributions of integrated groups. The indices of only four towns were at coercive levels, above 70, and these appear to be the result of small concentrated numbers of the second language group, related to the presence of long-distance migratory labourers housed in segregated hostels. Regionally, the Free State recorded significantly lower levels of segregation than the rest of the country, while KwaZulu-Natal recorded significantly higher levels. The relatively cosmopolitan character of the African urban areas in the Free State contrasted to the virtual mono-linguistic makeup of those in KwaZulu-Natal. In addition there was no sig-

nificant difference in segregation levels between the former homeland towns and those situated outside the homelands.

The analysis of other variables indicated that little pattern could be distinguished in other potential influences, as investigated in the earlier discussion of the indigenous to non-indigenous indices of dissimilarity. There were no significant relationships between level of segregation and size of total population, number of indigenous language speakers or the proportion of the population speaking indigenous languages.

The high degree of uniformity is all the more surprising when it is remembered that African ethnolinguistic segregation was one of the objectives of the National Party government, in furthering mother tongue education and in the political linkage policies between the homelands and the urban areas (Christopher, 1989). In the African townships in Gauteng, in particular, areas were zoned for individual language groups or at least for separate areas for the Nguni, Sotho and 'Others' linguistic families after 1954 (Morris, 1980). However, there was a chronic housing shortage in the African townships and hence the process of housing allocation was usually under severe pressure and the language policy could not be consistently applied. Indeed the general bureaucratic approach of adhering to the waiting list order in the allocation of municipal housing tended to favour the dispersal of linguistic groups. Furthermore, there were no resources available for the policy to be applied to those housing areas already occupied prior to the introduction of linguistic zoning. Thus in the country as a whole, there was no significant difference between the indices of dissimilarity of the speakers of languages from different linguistic 'families' and those belonging to the same families.

However, if Soweto (Johannesburg) is examined, the indices of dissimilarity between the various indigenous linguistic groups exhibit a limited degree of success for the zoning policy. Thus segregation levels between the speakers of languages in different linguistic families were consistently higher than those between the speakers of languages within the same family (Table 4). Nevertheless, the two largest groups, IsiZulu- and Sesotho-

Table 4

Indices of dissimilarity between African language groups in Soweto 1996 (above the diagonal) and 1985 (below the diagonal)

	IsiXhosa	IsiZulu	Sepedi	Sesotho	Setswana	Tshivenda	Xitsonga
IsiXhosa	—	33	67	58	68	73	61
IsiZulu	22	—	66	57	66	72	63
Sepedi	66	67	—	36	32	74	69
Sesotho	62	63	32	—	36	72	64
Setswana	69	68	24	29	—	76	71
Tshivenda	74	73	75	79	80	—	42
Xitsonga	68	67	71	74	75	32	—
Population 1996	78,137	365,258	56,151	157,352	125,373	31,387	70,250
Population 1985	71,312	223,469	60,584	103,059	118,967	26,404	49,932

Source: Statistics South Africa, Population Census 1996, Language tables: Soweto, and tables supplied for 1985 census.

speakers, registered only a moderate index of dissimilarity (57). There would appear to be no linguistic evidence that the potential ethnic polarisation associated with the Inkatha Freedom Party-African National Congress murderous conflict in the period from 1984 to 1994 was translated into spatial separation (Taylor and Shaw, 1994). The emergence of homogeneous ethnic residential security zones, noted elsewhere on the continent during periods of internal civil conflict, did not take place in South Africa (Pourtier, 2000). The two main linguistically identified groups of protagonists in the conflict remained residentially integrated with the IsiXhosa–IsiZulu index (33) barely above that accountable by purely random numbers. This finding would suggest that the conflict remained essentially political rather than ethnic in character.

An examination of the population of Soweto also indicated the increasing dominance of the major languages. Between 1985 and 1996 there was a recorded increase of 27.3% in the total population of Soweto (South Africa, 1985). However, the two largest groups recorded increases in excess of the average. Thus IsiZulu-speakers registered a 63.4% increase and Sesotho-speakers a 32.3% increase.⁸ In contrast IsiNdebele-speakers recorded a 73.8% decline and SiSwati-speakers an 84.0% decline, indicating a possible linguistic identification, even assimilation, with IsiZulu, following the demise of the homeland policy, which had promoted the other two languages for political purposes. Increased levels of literacy and multilingualism, together with a decline in linguistic nationalism, have led to an apparent fluidity of the boundaries between related languages, generally to the benefit of the larger grouping (Msimang, 1998). An important indicator in this respect is the high degree of language mixture in general conversation by the speakers of the minor languages (South Africa, 2000). Otherwise the relative stability of segregation levels may be gauged from a comparison of the 1985 and 1996 indices (Table 4).

In contrast to Soweto, Daveyton in Benoni was constructed and occupied, from its inception, according to ethno-linguistic zoning principles (de Swardt, 1970). Zones were provided for most of the recognised linguistic groups in the region and a concerted effort was made to allocate houses according to the master plan (Fig. 5). However, the compilers of the zoning plan could not have anticipated the apparent weak demo-

⁸ Although the census in 1985 sought to ascertain a person's mother tongue, the tables were presented in 'national units', with the implication that it was ultimately a political rather than linguistic affiliation which was sought. This has substantial implications in the case of the Swazi and Ndebele 'national units', where the daily common speech was often closer to IsiZulu. Changes in the phrasing of the language question in the census make inter-census comparisons problematical (Broeder and Extra, 1999; Maartens, 1998).

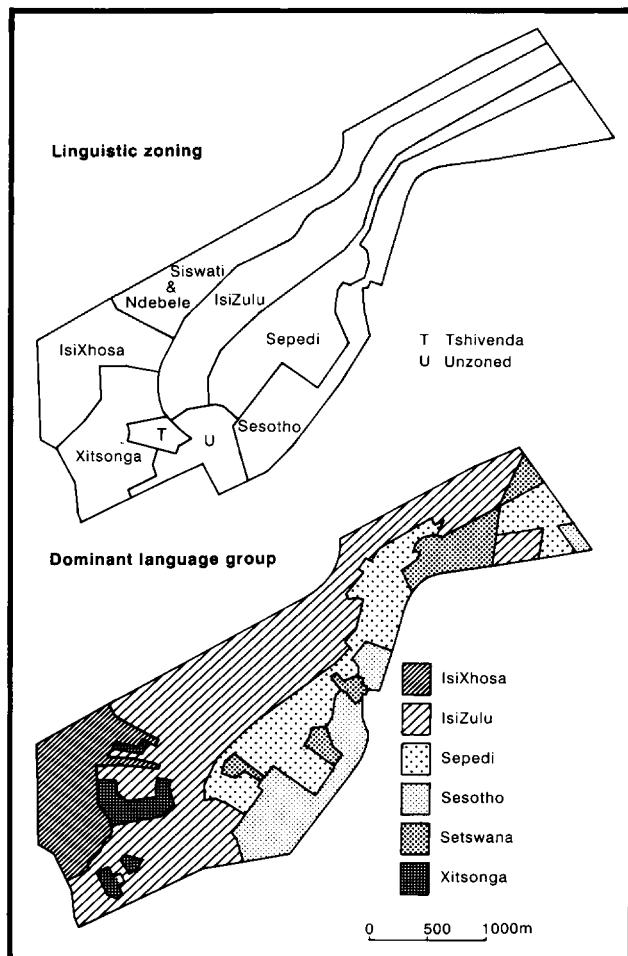


Fig. 5. Former linguistic zoning and dominant language group in Daveyton.

graphic representation of the speakers of IsiNdebele, SiSwati and Tshivenda, nor was provision made for the future dominance of IsiZulu-speakers. Thus the three zones set aside for the former groups became effectively occupied by IsiZulu-speakers. In addition the Xitsonga zone survived but was heavily penetrated by IsiZulu- and IsiXhosa-speakers. In contrast the Setswana-speakers were not provided with a zone, but were housed with Sepedi-speakers. As a result they occasionally constituted the dominant group in the Sepedi zone, with a markedly low inter-group index of dissimilarity (35) between them. The comparative success of enforced linguistic zoning may be gauged from the key IsiZulu–Sepedi index of dissimilarity which stood at 73, while the Xitsonga–Sepedi index measured 78. Both indices indicated a coercive measure of segregation, which was the aim of the government planners (Table 5). Even the Sepedi–Sesotho index measured 58, despite the linguistic affinity of the two groups. The equivalent (57) IsiZulu–Xitsonga index is a measure of the former speakers' penetration of the latter's zone, as a result of the chronic housing shortage.

Table 5

Inter-group indices of dissimilarity in Daveyton (above diagonal) and the remainder of Benoni (below the diagonal), 1996

	IsiNdebele	IsiXhosa	IsiZulu	Sepedi	Sesotho	Setswana	SiSwati	Xitsonga
IsiNdebele	—	84	53	75	76	81	50	77
IsiXhosa	44	—	74	82	77	85	75	71
IsiZulu	35	34	—	73	70	78	48	57
Sepedi	44	32	30	—	58	35	73	78
Sesotho	47	34	30	33	—	51	72	73
Setswana	57	47	42	42	39	—	79	81
SiSwati	40	35	36	38	42	54	—	65
Xitsonga	37	40	41	40	45	50	41	—
Total Daveyton	3560	11,931	39,621	13,318	9321	6897	1723	6192
Total remainder of Benoni	9847	18,832	91,376	26,405	19,620	6286	6203	15,437

Source: Statistics South Africa, Population Census 1996, Language tables, Benoni.

The limited extent of African linguistic segregation in the remainder of Benoni offers a significant contrast to patterns resulting from the zoning of Daveyton. On average inter-group indices of dissimilarity were 28 points lower elsewhere in Benoni. The Tshivenda indices have been excluded from consideration as Tshivenda-speakers constituted under one percent of the population in both areas. It is notable that whereas in Daveyton, virtually all indices were at coercive levels, above 70, none of those in the remainder of Benoni exceeded 57. Most noticeable was the IsiZulu–Sepedi index which measured 30 in the remainder of Benoni, a value akin to a random distribution, but had been at coercive levels in Daveyton. Furthermore, there was no significant difference between the segregation levels of the speakers of languages in different linguistic ‘families’, when compared with speakers from the same linguistic family in the area of Benoni outside Daveyton. These findings suggest that segregation between the speakers of different African languages, where government intervention had not been coercive in the past, was insignificant, with no evidence of linguistic enclaves in either the pre-apartheid township (Wattville) or the more recent informal settlements surrounding Daveyton.

4. Conclusion

Although the urban areas are often regarded as cultural and linguistic melting-pots, most South African cities remain essential mono-, bi-, or at most tri-lingual. The majority of towns and cities have drawn both their indigenous and non-indigenous language speakers from the immediate rural hinterland thereby reinforcing this characteristic. Only in the industrial heartland of Gauteng, which has attracted large numbers of people from all over the country, and indeed from beyond its borders, can speakers of all 11 official languages be found in sufficient numbers to suggest the emergence of a fully multi-lingual urban region. Within such an en-

vironment there is a pressing need for a lingua franca. The dominance of English in the conduct of government and commerce has placed pressure for education to be conducted in that language for the purpose. The danger which this poses for indigenous languages has evoked a significant state response in the promotion of all 11 official languages, although there is evidence that the smaller linguistic groups are being assimilated into the larger. State resistance to the dominance of English, for the moment, suggests that a major language shift, as experienced by the Indian population of the country in the 20th century, is not imminent.

The observed patterns of residential linguistic segregation in South African cities are dominated by the fundamental indigenous African–non-African cleavage in national society. The division constitutes a tangible inheritance from the apartheid and earlier eras and segregation between the two sectors is consequently maintained at remarkably high levels and indeed may be described as hypersegregation. This linguistic divide may remain as marked as the racial divide which it paralleled as South African cities undergo the slow process of democratic transformation. Anticipated changes will involve, first, the partial undoing of the apartheid spatial segregation plan and, secondly, the accommodation of massive expansion as the urbanisation of the indigenous population accelerates, freed from earlier controls on urban residency. Nevertheless, post-apartheid reconstruction and development programmes have tended to re-enforce the lines drawn in the previous era. Owing to the extreme poverty of the vast majority of the African population the basic racial and linguistic divide is unlikely to be eroded rapidly, without a radical government-driven urban restructuring programme. The absence of English home language speakers within such areas further reduces the possibility of significant language shift in this respect.

Residential segregation between English and Afrikaans speaking people shows greater potential for reduction as the Coloured, Indian and White populations

return to the more integrated pre-apartheid patterns, based on economic and social status. Segregation levels between the speakers of the various indigenous languages are substantially lower and the localised inheritance of legally enforced separation will almost certainly decline as the housing market becomes more flexible. It may be concluded that where legal coercion has not been exercised in the past, linguistic segregation is slight and differences in indigenous home languages are clearly of little importance in determining African residential patterns within the city. This shared urban community experience is of significance in fostering a sense of national cohesion. In view of the overwhelming and increasing African majority in the urban areas of South Africa this is the remarkable change from the segregationist past without a common national identity. However, language will remain a significant racial, social and economic indicator, when the broad division between the speakers of indigenous and non-indigenous languages is considered.

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