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Place perceptions (mental "maps") of key potential migration destinations

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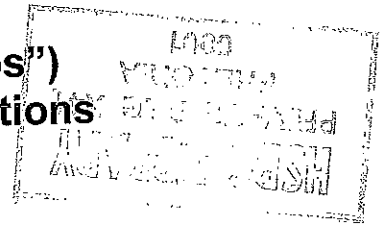
Place perceptions are all about images of spatial entities, but more often than not these tend to conjure images of issues around spatial boundaries, which can be considered from various hierarchical-level perspectives, i.e. ranging from international to local. The special border situation on the Indian subcontinent – as a consequence of the partition in 1947, which created one of the major hot spots in boundary conflicts (between India and Pakistan) – spring to mind. Various studies have also touched upon the "game of drawing borders" played by former colonial powers in Africa, and one is reminded of the rather artificial cultural (linguistic) separation between the citizens of Switzerland and their German, French and Italian-speaking neighbours. At the local front the conflict about provincial jurisdiction over the Bushbuck Ridge area between Mpumalanga and Limpopo is a familiar example. Street hawkers fighting over "turf" represent another highly localised example of border conflicts. However, this paper is not concerned with boundaries but with popular perceptions of the spatial entities that the borders circumscribe.

In a recent migration survey by the Human Sciences Research Council (HSRC) an attempt was made to determine people's perceptions of various places in South Africa as potential migration destinations. Although this paper is **not** about migration intentions per se, it looks at the perceptions of the people included in the survey about the attraction or suitability of possible alternative places of residence for specific purposes, namely as places in which to raise children, retire or to be buried.

What, then, would be the purpose of an analysis of such data, and how can this information be used to improve our understanding of migration within, to and from South Africa? A very brief overview of the literature on place perceptions and mental maps, preceding a description of the basic survey results, should provide at least partial answers to these questions. These will be followed by an attempt to develop an appropriate model for the analysis of place perceptions.

1   BRIEF LITERATURE REVIEW

In his book, "The image of the city", Kevin Lynch (1960:4) introduced the concept of environmental image (i.e. the generalised mental picture of the exterior physical world that is held by an individual, which is used to interpret information and to guide action). According to Fuller and Chapman (1974) "...most migration studies consider the perception of alternative destinations in the abstract, as an unmeasured and residual variable that underlies the decision to move. To what precise extent the lack of an explicit place perception variable weakens the predictive power of current migration models is difficult to say. However, ... none of the models based on distance, the differential places of origin and destination, economic opportunity,

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the effects of friends and relatives, and the various characteristics of the migrants themselves can satisfactorily predict the migration streams that occurred..." (p. 492).

In my view the term "place perception" is an overarching concept that includes but is not limited to a "mental (or cognitive) map". I see cognitive maps as mental models of the relative location and attributes of spatial phenomena or entities, but some migration researchers define mental maps quite specifically as graphic images. Fuller & Chapman (1974), for example, define mental maps as "...the graphic depiction of expressed preferences for alternative residential locations" (p. 492). I am not convinced, though, that mental maps should generally be defined in preferential terms, because even those people with no intention to move have some perceptions about places other than the one in which they live. In migration studies an emphasis on preferences may of course be quite valid, though.

Researchers tend to agree, however, that although place perceptions and mental maps are helpful in understanding people's spatial behaviour, they are subjective and culturally influenced. By definition a mental map is highly subject-specific, yet it has been shown that individuals often record the same things in their mental maps. Researchers such as Golledge (1976) and Newcombe (1985) therefore attempted to develop techniques for the production of mental maps, but since such rather elaborate methods cannot be readily applied in questionnaire surveys these have not been used in this study.

It should be clear that in the absence of a "graphic depiction", as required by Fuller and Chapman (1974), we should rather use the broader term "place perception" instead of "mental map". (My use of the word "maps" in apostrophes in the title to this paper serves to highlight this distinction and is therefore not only justified but also necessary.)

The concept "place perception" is of course closely related to that of "place utility", a phrase first used by Wolpert (1965) and since elaborated upon by various others (including DaVanzo 1981). De Jong and Fawcett (1981) labelled place utilities as "opportunity structure differentials" to emphasise the fact that different places have different potential utilities for different people.

The value-expectancy theory, extended to migration by De Jong and Fawcett (1981), would provide a very useful framework for studying the reasons why different people rate the same places differently, especially if disaggregated in terms of theoretical and empirically confirmed dimensions. This would link place perceptions with Gardner's (1981:73) question as to how macro-level factors are translated or conceptualised with reference to individual goal factors and values. However, at the time of writing the confirmatory analyses of these hypothesised dimensions on the basis of our survey data have not yet been done, and therefore it will not be possible to derive the underlying causes of specific place perceptions at this stage.

While the specific place (spatial entity) itself is the major factor in place perceptions, another important component of the "place perception" concept is the level of information about that place (cf. Goodman 1981), and that will also be used in this paper as a predictor of place perceptions.

The next section deals with general descriptions of the expected correlates of place perceptions, and covers each of these variables on their own in the form of univariate analyses. In

the section following that one these predictor variables will be used in combination by means of multivariate analyses.

2 DESCRIPTION OF THE FINDINGS ON PLACE PERCEPTIONS

Three sets of suitability-related types of questions were asked in respect of (a) the preferred migration destination, (b) Johannesburg and (c) Cape Town, with a view to obtaining information on respondents' perceptions of these (often far-off) places. The three question types, all emphasising future "needs", deal with the suitability of these places for raising children/grandchildren, for retirement and for being buried in.

Johannesburg is the main metropolitan centre of Gauteng, which, according to Kok, O'Donovan, Bouare and Van Zyl (2003), is the major migration destination in South Africa. The Western Cape, the economic heart of which is Cape Town, is the second most important migration destination in South Africa. It was logical, therefore, to identify these two metropoles as the most likely potential destinations in South Africa. Since our emphasis was on inter-area migration, instead of intra-city moves, respondents living within Gauteng or in the Greater Cape Town area were not asked to provide perceptual information on the (nearby) city concerned.

2.1 Preferred possible migration destination

Respondents were asked to which place they were planning or had considered to move. Of course the responses ranged from nearby towns or rural districts to countries abroad. One can capture such a wide range of possible destinations quite appropriately in a suitable destination model, and the development of such a model is precisely our main activity after the workshop until the end of the current project. However, to satisfactorily cover all these possibilities in a single paper is virtually impossible, and consequently one has no option but to commit one of the most serious sins in spatial research, namely to generalise about places.

TABLE 1: FUTURE MIGRATION POSSIBILITIES

| Migration-"intention" category	Weighted number	Cumulative number	Propor- tion	Cumulative proportion
Planning to move permanently: Next 12 months	3 403 546	3 403 546	14%	14%
Intending to move permanently: Next 5 years	2 237 368	5 640 914	11%	25%
Planning to move temporarily: Next 12 months	536 087	6 177 001	3%	28%
Intending to move temporarily: Next 5 years	459 673	6 636 674	3%	31%
Ever considered moving (either permanently or temporarily)	235 562	6 872 236	1%	32%
Would like to move (permanently or temporarily)	240 415	7 112 651	1%	33%
TOTAL	7 112 651	7 112 651	33%	33%

Table 1 shows the distribution of responses to the battery of questions regarding possible future migration. Merely a third of all respondents indicated that they planned, intended, had considered or would like to move elsewhere. One-quarter (25%) of all respondents planned or intended to move *permanently* within the next five years, while only 6 per cent indicated that they intended to move away *temporarily* over the same period of time. The remaining two-thirds (67%) of respondents clearly would not like to move at all.

(a) *Previous residence (of at least six months) in the identified possible destination*

Those respondents who indicated that they would like to move were asked whether they had previously lived (for at least six months) in the identified (possible) destination. More than one-quarter (27%) of them had lived there before, and their mean previous duration of stay in the possible future destination was eight years.
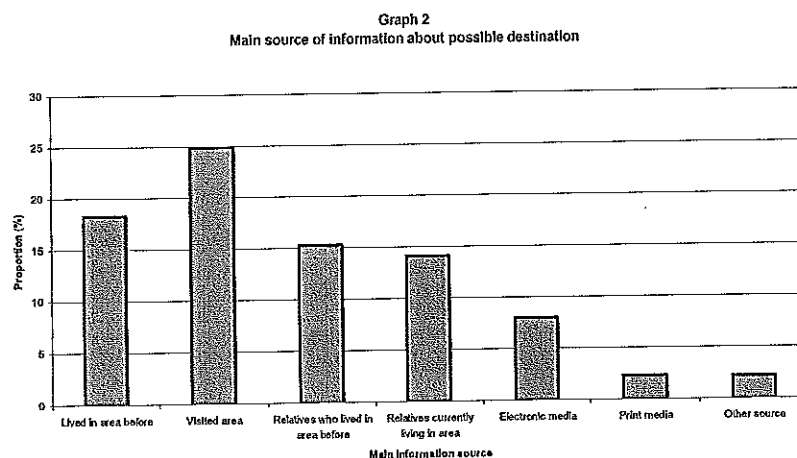
(b) *Knowledge of the identified possible destination*

Respondents were asked how much they knew of the possible destination. Almost one-fifth (12%) admitted that they knew nothing whatsoever about the area. At the other extreme, 16% indicated that they knew "everything there was to know" about the destination. In Figure 1 the distribution of responses is illustrated.

Graph 1
Knowledge of possible destination
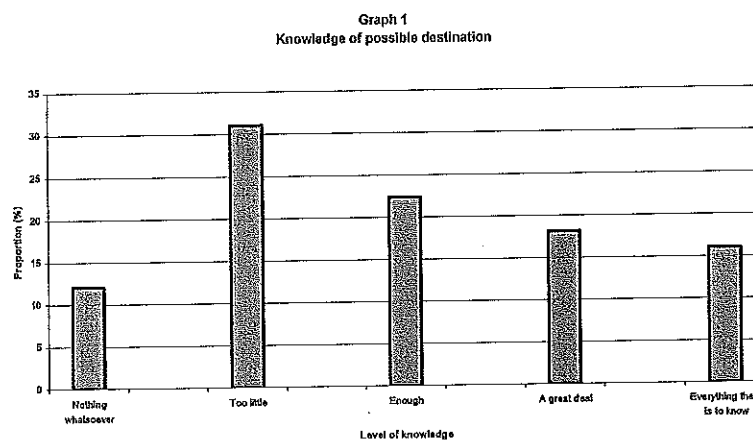
(c) *Main source of information about the identified possible destination*

Respondents were asked from where to had obtained most of their information about the possible destination. The proportions of all respondents considering or wishing to move are illustrated in Graph 2 (which excludes the category "know nothing whatsoever"). More than two-fifths (43%) of the respondents had on a first-hand basis obtained most of their information about the possible destination, i.e. during previous visits to the area (25%) and while previously living there (18%).

Graph 2
Main source of information about possible destination

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(d) *Presence of relatives or friends in the identified possible destination*

Seventy per cent of the respondents had immediate relatives or close friends living in the possible destination. Less than one-third (30%) did not have any such contacts in the area.

(e) *Contact with relatives or friends in the identified possible destination during preceding year*

More than three-quarters (76%) of the respondents with immediate relatives or close friends living in the possible destination had been maintaining contact with these relatives or friends in the 12 months preceding the survey.

In Graph 3 the nature of these contacts are illustrated. When interpreting this graph it should be borne in mind that the underlying data represent a set of "multiple response options". A distinction must therefore be made between the proportion of "responses" and the proportion of "cases". For the "responses" the denominator is the total number of "yes" responses over all items, and for "cases" the denominator is the total number of respondents. While the proportions of "responses" (indicating the percentage of times particular items received "yes" responses) add up to 100 over all items, the proportions of "cases" (what proportion of the respondents said "yes" to a particular item) do not. Which one of the two proportions is used, depends on how one wishes to analyse the results. In this particular case we may be interested in the distribution of "yes" responses over all the items, and then we would look only at the proportions of "responses". However, if our main interest lies in the proportion of "yes" responses to a particular item, we would look at the percentage of "cases" in respect of that item.

For the purpose our analysis, the proportion of cases responding to each item is of key interest. Clearly visits and telephone conversations represent the majority of contacts, and to about the same extent (between 65% and 72%). Of the remaining items, only information about jobs/work in the possible destination represents a any notably higher proportion of cases (30%).

Graph 3
Nature of contact with close relatives/friends in possible destination
(during preceding 12 months)

Type of contact (past 12 months)

☐ Responses ■ Cases
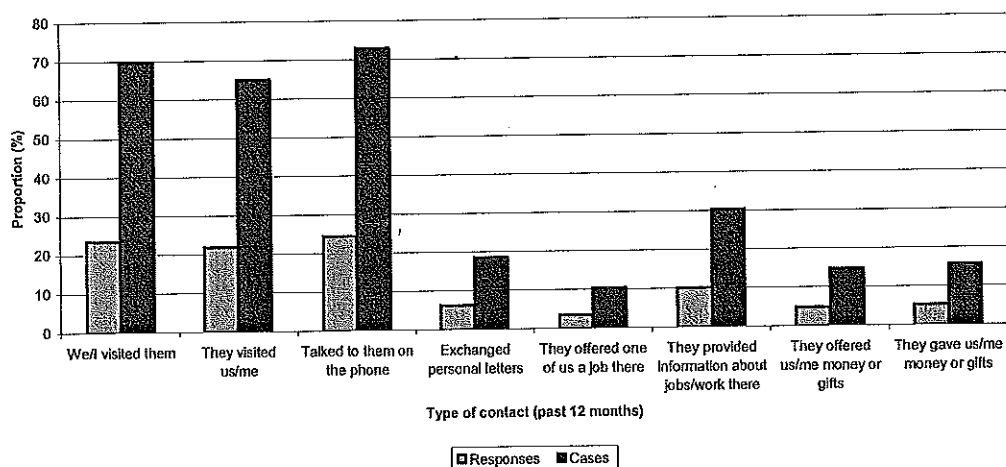
(f) *Perceptions regarding overall living conditions in the identified possible destination*

Graph 4
Overall living conditions
Possible destination compared to current area of residence
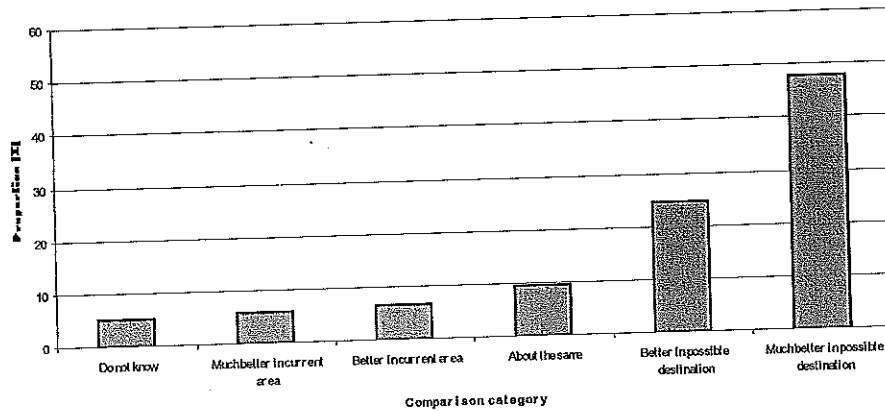
Respondents were asked to indicate whether, and to what extent, the overall living conditions were better in the possible destination than in the current area of residence. Graph 4 illustrates the results. It should be clear that destination areas received far more favourable assessments in this regard than respondents' current areas of residence. Only 5 per cent did not know how the two areas compared in terms of overall living conditions.

(g) *Perceptions of the identified possible destination as a place to raise children, to live after retirement and to be buried in*

Respondents were asked to what extent they would like (a) their children or grandchildren to be raised in the possible destination, (b) to live in the possible destination when they retired, and (c) to be buried in the possible destination one day. These questions were borrowed from the questions asked during the surveys in South Africa's neighbouring countries as part of the migration surveys for the Southern African Migration Project (SAMP), as reported by McDonald (2000).

Graphs 5, 6 and 7 illustrate the responses to these questions respectively. While the possible destinations were generally regarded as suitable for raising children (Graph 5) and to some extent also as suitable places in which to live after retirement (Graph 6), they were generally regarded a great deal less favourably as suitable places to be buried in (Graph 7). The latter is clearly more a reflection of the emotional ties that one has with the current area of residence than with the actual "suitability/unsuitability" of other places.

In Section 3 more attention will be given to these responses, with the emphasis being placed there on the differences in place perceptions of people with different demographic, social and economic characteristics.
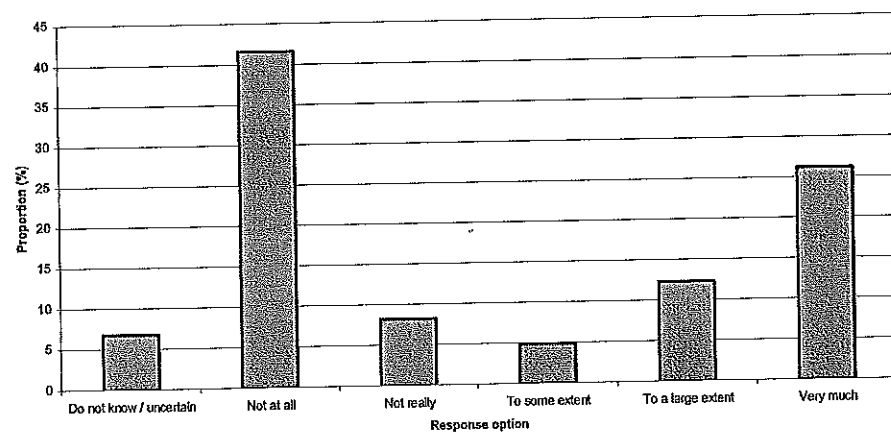
Graph 5
Extent to which the possible destination is perceived as suitable for raising children
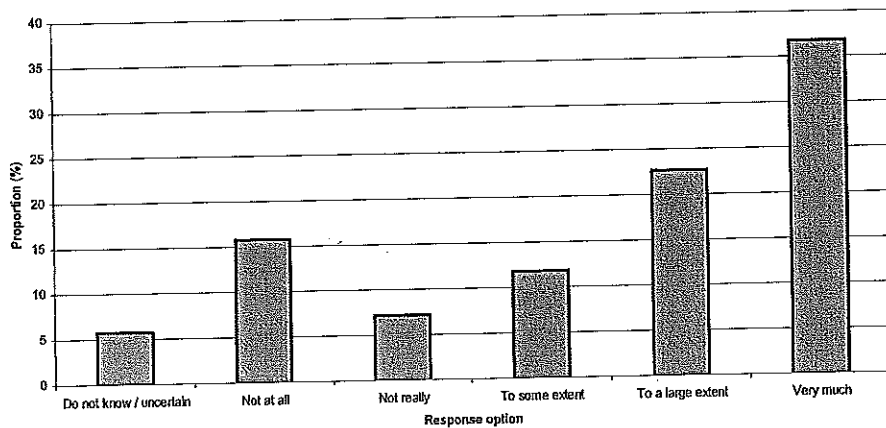
Graph 6
Extent to which possible destination is perceived as suitable for living after retirement
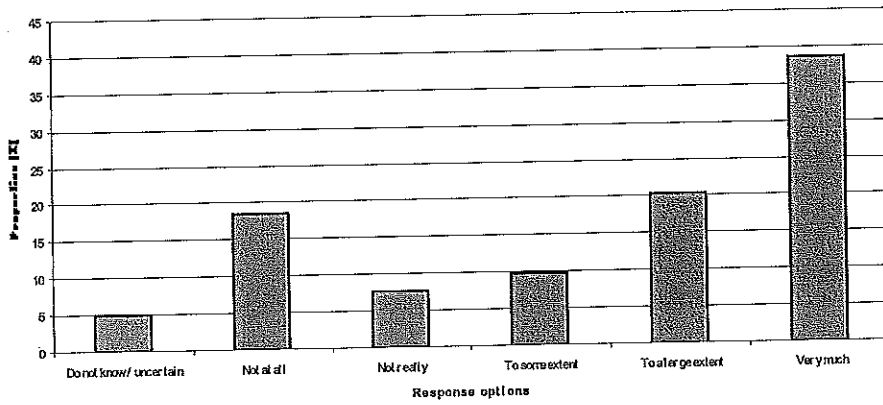
Graph 7
Extent to which possible destination is perceived as a suitable place to be buried in

(h)   Conclusions

Only a third of the respondents in this sample survey had ever considered moving or would like to move. The findings above relate to the perceptions of these respondents only. People seem to have rather positive perceptions about their preferred destinations and this is particularly clear from a comparison of overall living conditions between the preferred destination and the current area of residence.

Up to this point the potential destinations were of necessity treated as totally amorphous entities. In the following two subsections the potential destinations are clearly defined as specific areas, namely Johannesburg and Cape Town respectively, allowing more opportunities for drawing comparisons between specific places.

2.2   Place perceptions of Johannesburg

The same battery of questions was asked in respect of Johannesburg as a place in which to live and work as for the preferred destination (described in Section 2.1).

(a)   Previous residence (of at least six months) in Johannesburg

More than one-tenth (11%) of the respondents living outside Gauteng at the time of the survey had previously lived in Johannesburg for a period of six months or longer. When assuming that the duration of stay in Johannesburg was zero in those cases where respondents had not lived in Johannesburg for six months or longer, the mean duration of their previous stay in the city was 5,5 years. The corresponding distributions among the other provinces are indicated in Table 2.

TABLE 2:   MEAN LENGTH OF PREVIOUS STAY IN JOHANNESBURG

Current province	Proportion having lived there before	Length of previous stay in Johannesburg (years)		
		Minimum	Maximum	Mean
Western Cape	11%	0	25	5,9
Eastern Cape	15%	1	40	6,9
Northern Cape	11%	0	29	8,1
Free State	4%	1	10	3,8
KwaZulu-Natal	10%	1	40	7,5
North West	8%	1	12	4,9
Mpumalanga	1%	0	6	4,6
Limpopo	24%	0	9	2,6
TOTAL	11%	0	40	5,5

(b)   Knowledge of Johannesburg

Respondents were asked how much they knew about Johannesburg as a place in which to live and work. In Graph 8 the results are illustrated by current province.

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Graph 8
Level of knowledge about Johannesburg
(by current province)
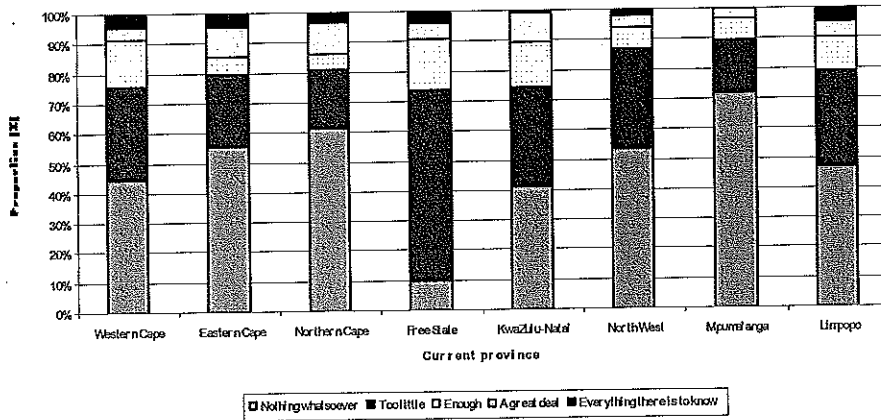
Almost three-quarters (72%) of the Mpumalanga respondents knew "nothing whatsoever" about Johannesburg, and a further 18 per cent indicated that they knew "too little". In the case of the Free State only one-tenth (10%) of the respondents admitted that they knew "nothing whatsoever" about Johannesburg, but a further 64 per cent indicated that they knew "too little". In view of the general proximity of Johannesburg to Mpumalanga and Free State (which are adjacent to Gauteng), these findings may come as a surprise, but one has to bear in mind that *the numbers in these two provinces who answered this question represent only minute proportions of the respondents in these two provinces*, largely due to the sampling design and some fieldwork inadequacies.

(c)   *Main source of information about Johannesburg*

Respondents were asked from where they had obtained most of their information about Johannesburg. In Graph 9 the results are illustrated by province (but excluding Mpumalanga and the Free State, where too few respondents were sufficiently familiar with Johannesburg).

Graph 9
Main source of information about Johannesburg
(by current province)

9
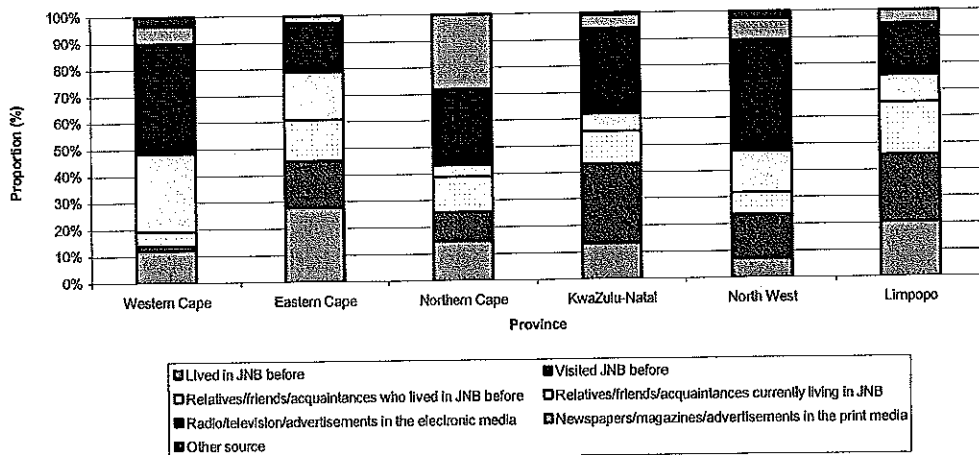
In the absence of Mpumalanga and the Free State, the Eastern Cape stands out as the province where the smallest proportion of residents are familiar with Johannesburg. A majority of Eastern Cape respondents (56%) indicated that they knew "nothing whatsoever" about Johannesburg as a place in which to live and work. One might be inclined to ascribe this lack of knowledge to the distance between the areas involved, but when this proportion is compared to that for the Western Cape (which is at an even greater distance from Johannesburg than the Eastern Cape), where half the Eastern Cape proportion (28%) knew "nothing whatsoever" about Johannesburg, it becomes clear that such an explanation would not be valid.
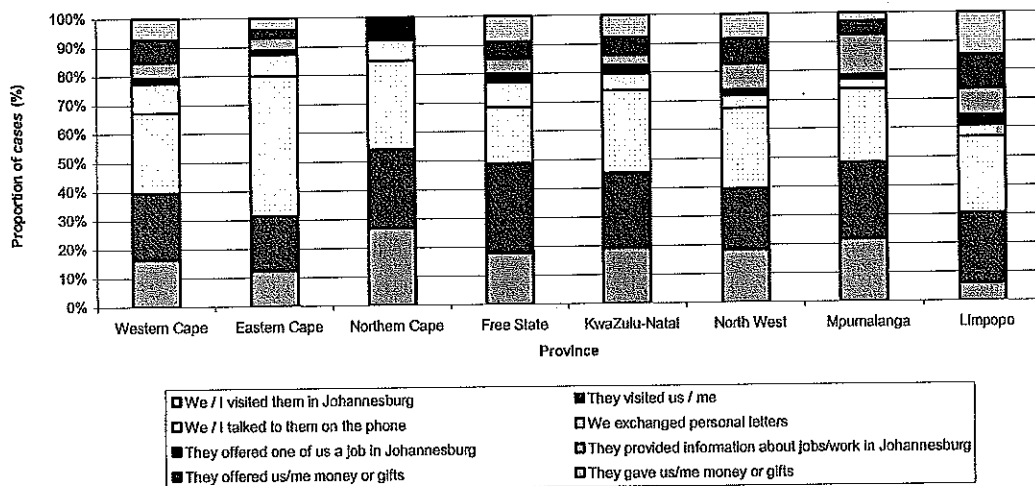
A comparatively large proportion of people in the Western Cape (30%) tend to depend mainly on the electronic media (radio and television) for information about Johannesburg. A further interesting feature of Graph 9 is the relatively high proportion (21%) of respondents in the Western Cape whose main sources of information about Johannesburg are relatives, friends or acquaintances currently living in Johannesburg, a topic to be discussed next.

(d) *Presence of relatives, friends or acquaintances in Johannesburg*

While almost two-fifths (38%) of the respondents living outside Gauteng had close relatives or friends in Johannesburg, 62 per cent did not have any such contacts.

(e) *Contact with relatives, friends or acquaintances in Johannesburg*

Graph 11
Nature of contact with relatives/friends/acquaintances in Johannesburg
(by current province)

☐ We / I visited them in Johannesburg	■ They visited us / me
☐ We / I talked to them on the phone	☐ We exchanged personal letters
■ They offered one of us a job in Johannesburg	☐ They provided information about jobs/work in Johannesburg
■ They offered us/me money or gifts	☐ They gave us/me money or gifts

From Graph 11 it should be clear that mutual visits comprise the majority of contacts that respondents in the Northern Cape had with close relatives and friends in Johannesburg. Not too far behind were people in the Free State, Mpumalanga, KwaZulu-Natal, Western Cape and North West. For respondents in the Eastern Cape the main form of contact with their Johannesburg relatives and friends was by telephone. Money

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or gifts being offered or given by relatives or friends in Johannesburg were an important form of contact for more than one-quarter of respondents in Limpopo.

(f) *Perceptions regarding overall living conditions in Johannesburg*

Graph 12 shows that less than a third of the respondents (32%) were of the opinion that the overall living conditions in Johannesburg were better than in their current areas of residence. In fact, about the same proportion (31%) thought that conditions in their current areas were "much better" than in Johannesburg.

Graph 12
Johannesburg comparent to current area of residence
in terms of overall living conditions
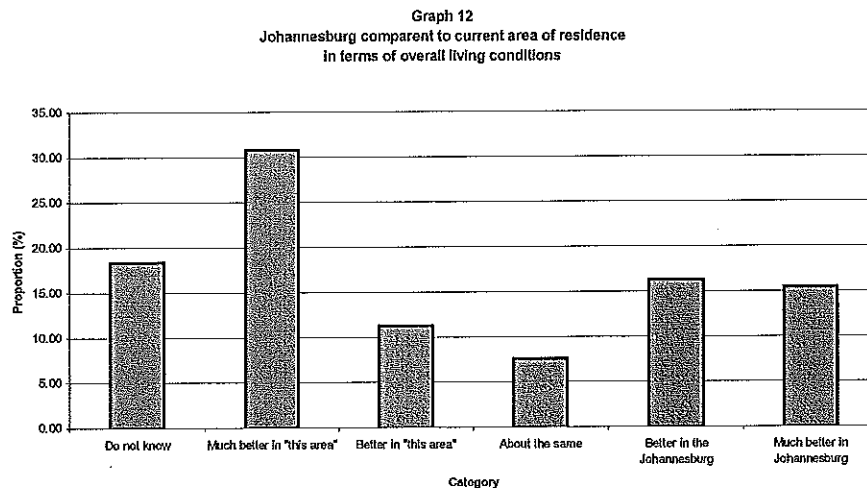
(g) *Perceptions of Johannesburg as a place to raise children, to live after retirement and to be buried in*

From Graphs 13–15 it should be clear that Johannesburg is not perceived to be an attractive possible destination. A vast majority of respondents indicated that the city is "not at all" suitable for raising children, for retirement and to be buried in.

While slightly more than one-fifth of the respondents (21%) though that Johannesburg might be suitable for raising children, this proportion drops notably when it comes to its suitability for retirement (13%), and the drop is even more dramatic when respondents considered its suitability as a place to be buried in (6%).

(h) *Perceptions of Johannesburg: summary*

From the findings above it should be clear that Johannesburg is not seen as an attractive place in which to live, work, retire and die. A contributing factor here could be the negative publicity Johannesburg receives as a result of reported crime and inner city degradation. It would be interesting, therefore, to compare these results with those for Cape Town, which might have received less negative publicity concerning these matters (although reported "terrorist bombings" in the Mother City might also have impacted negatively on people's perceptions).

Graph 13
Suitability of Johannesburg as a place in which to raise children
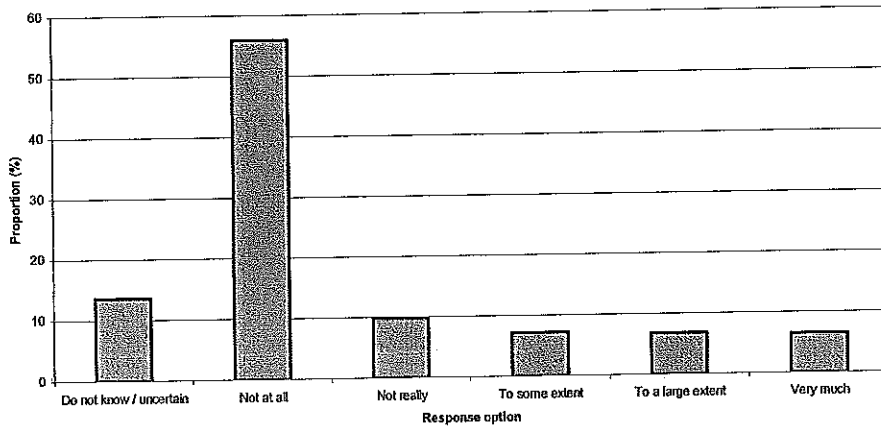
Graph 14
Suitability of Johannesburg as a place in which to retire
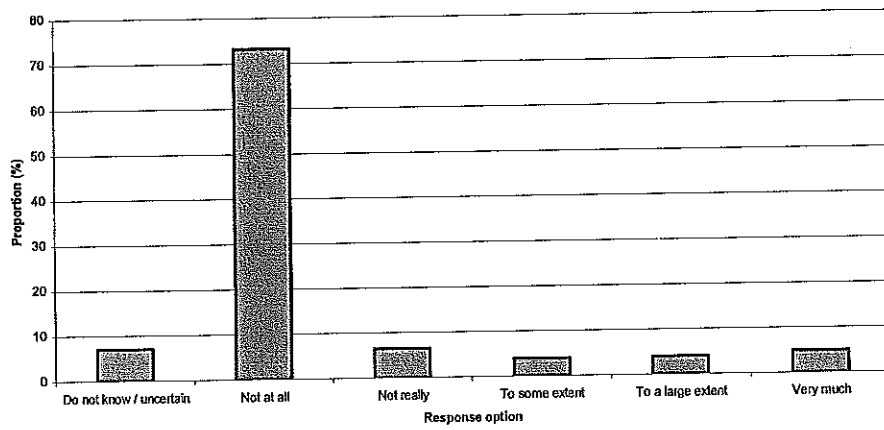
Graph 15
Suitability of Johannesburg as a place in which to be buried

2.3 Cape Town as a possible destination

Once again, the same questions as in Section 2.1 were asked in respect of Cape Town.

(a) *Previous residence (of at least six months) in Cape Town*

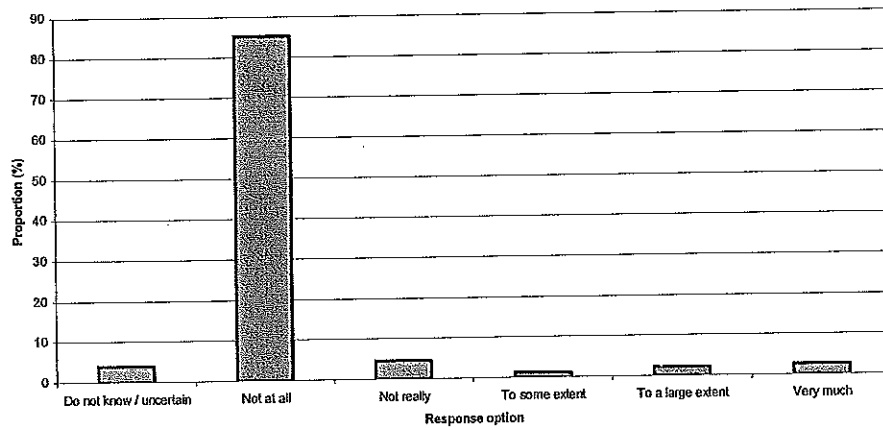Only 4 per cent of the respondents living outside Greater Cape Town (interpreted incorrectly by many interviewers as "outside the Western Cape) had previously lived in Cape Town for a period of six months or longer. When assuming that the duration of stay in Cape Town was zero for those respondents who had not lived in Cape Town for six months or longer before, the mean duration of their previous stay in the city was 3,6 years. The corresponding distributions among the other provinces are indicated in Table 3.

TABLE 3: MEAN LENGTH OF PREVIOUS STAY IN CAPE TOWN

Current province*	Proportion having lived there before	Length of previous stay in Cape Town (years)		
		Minimum	Maximum	Mean
Eastern Cape	9%	0	18	3,7
Northern Cape	5%	1	4	2,6
Free State	3%	1	7	4,0
KwaZulu-Natal	2%	0	16	3,8
North West	5%	0	19	1,0
Gauteng	3%	1	32	6,1
Limpopo	3%	0	8	1,2
TOTAL	4%	0	32	3,6

* Excluding Mpumalanga, where only one case was found with any previous residence (of six months or longer) in Cape Town.

(b) *Knowledge of Cape Town*

Graph 16
Knowledge of Cape Town as a place in which to live and work
(by current province)

13
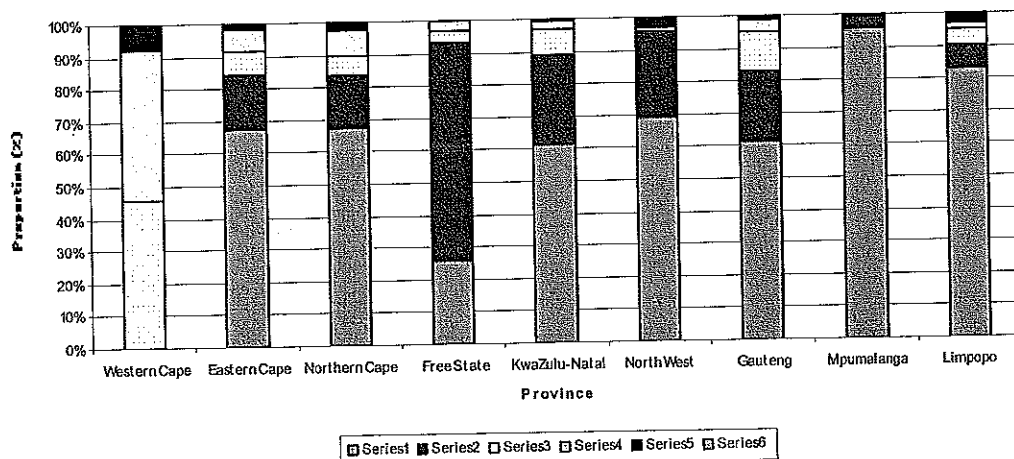
Graph 16 shows that, as might have been expected, all Western Cape respondents knew "enough" or more about Cape Town as a place in which to live and work. In contrast, almost all the respondents in Mpumalanga knew "nothing whatsoever" about the city, while a vast majority of Free State respondents knew "too little" about the place. However, the numbers in the latter two provinces are too small to warrant any serious deliberation.

(c) *Main source of information about Cape Town*

As should once again be clear from Graph 17, the majority of respondents in provinces (other than the Western Cape, Mpumalanga and Free State) k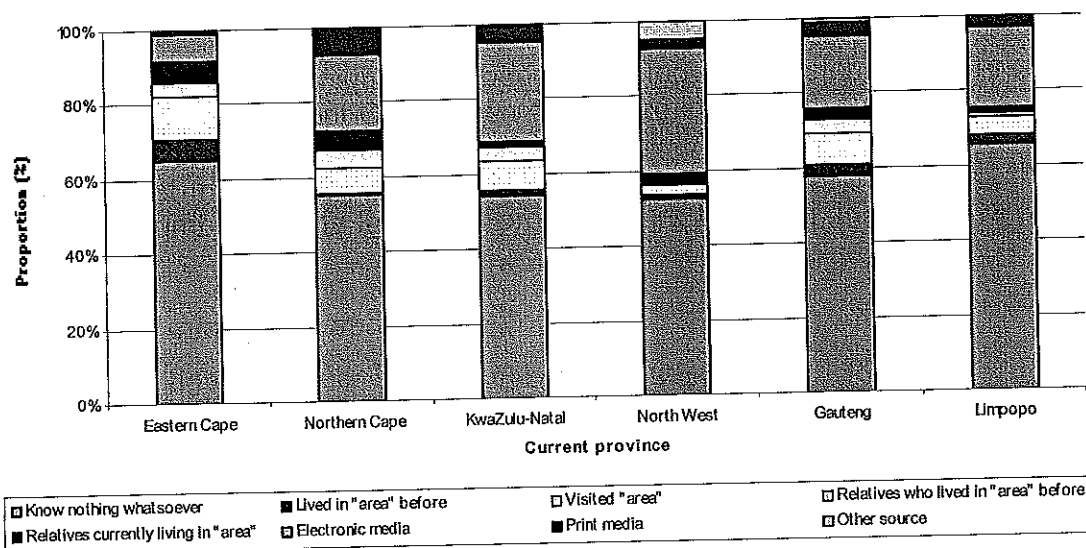new nothing whatsoever about Cape Town as a city in which to live and work. The electronic media (radio and television) are the main sources of information for people in all the provinces covered except the respondents of Eastern Cape, whose previous visits account for most of the information they have in respect of Cape Town. Relatives currently or previously living in the city are the next most frequently cited sources of information.

Graph 17
Main source of information about Cape Town

Legend			
□ Know nothing whatsoever	■ Lived in "area" before	□ Visited "area"	□ Relatives who lived in "area" before
■ Relatives currently living in "area"	□ Electronic media	■ Print media	□ Other source

(d) *Presence of relatives, friends or acquaintances in Cape Town*

Slightly more than one-eighth (13%) of the respondents had relatives or friends living in Cape Town, which means that 87 per cent had no such contacts in the city.

(e) *Contact with relatives, friends or acquaintances in Cape Town*

Of the respondents with close contacts in Cape Town, more than three-fifths (61%) had had some contact with them during the 12 months preceding the survey. In Graph 18 the nature of the contact is illustrated.

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Graph 18
Nature of contact with relatives, friends and acquaintances in Cape Town
(by province)

Legend:
- ☐ We / I visited them in Cape Town
- ☐ We / I talked to them on the phone
- ■ They offered one of us a job in Cape Town
- ■ They offered us/me money or gifts
- ■ They visited us / me
- ☐ We exchanged personal letters
- ☐ They provided information about jobs/work in Cape Town
- ☐ They gave us/me money or gifts
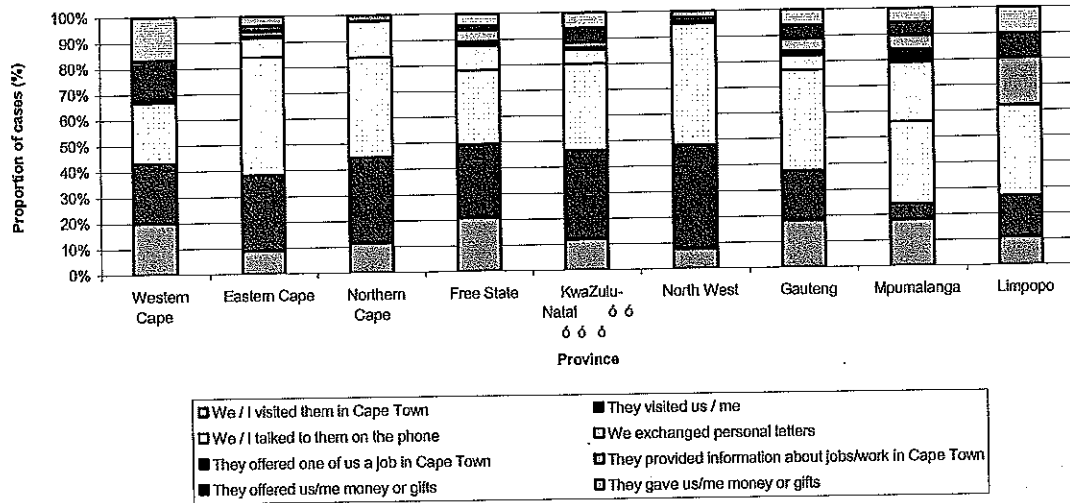
Except for Mpumalanga and Limpopo respondents, approximately 40 per cent of the contacts with persons living in Cape Town during the preceding 12 months had been in the form of mutual visits. Other important forms of contact were telephone conversations and letters, with the latter especially true for Mpumalanga and Northern Cape residents. The offering or giving of gifts by relatives or friends in Cape Town was particularly prominent for Western Cape and Limpopo respondents.

(f)   Perceptions regarding overall living conditions in Cape Town

Graph 19
Cape Town compared to current area of residence
(by current province)

Legend:
- ☐ Do not know
- ■ Much better in "this area"
- ☐ Better in "this area"
- ☐ About the same
- ■ Better in Cape Town
- ☐ Much better in Cape Town

15
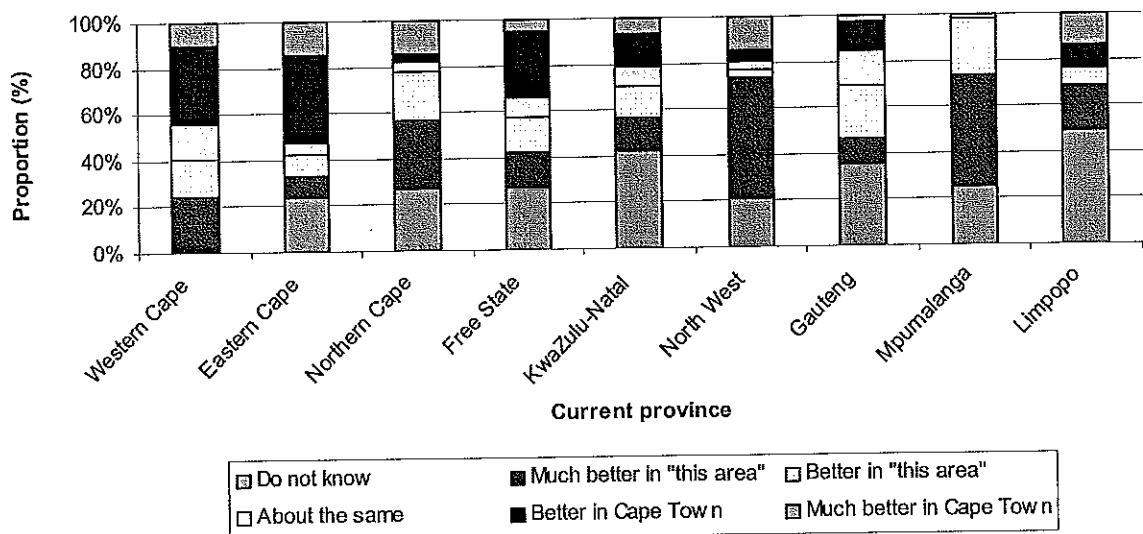
In Graph 19 the distribution of respondents' answers to the question as to how Cape Town compared to their current area of residence is shown by current province. Persons in the Eastern Cape, Western Cape and Free State were notably more inclined to rate conditions in Cape Town as "better" than residents in other provinces. Significant, and approximately equal, proportions (about 15%) of respondents in the Eastern Cape, Northern Cape, North West and Limpopo actually rated conditions in Cape Town as "much better".

(g)   *Perceptions of Cape Town as a place to raise children, to live after retirement and to be buried in*

About the same pattern as for Johannesburg emerges in the case of Cape Town (see Graphs 20–22). As with Johannesburg, this city is generally not perceived as suitable for raising children, nor is it regarded as a place in which one should retire or be buried.

Graph 20
Suitability of Cape Town as a place in which to raise children
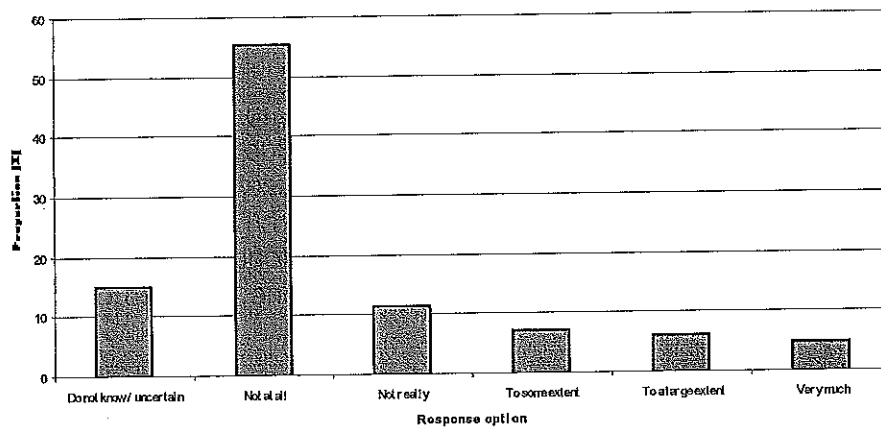
Graph 21
Suitability of Cape Town as a place in which to retire

Graph 22
Suitability of Cape Town as a place in which to be buried
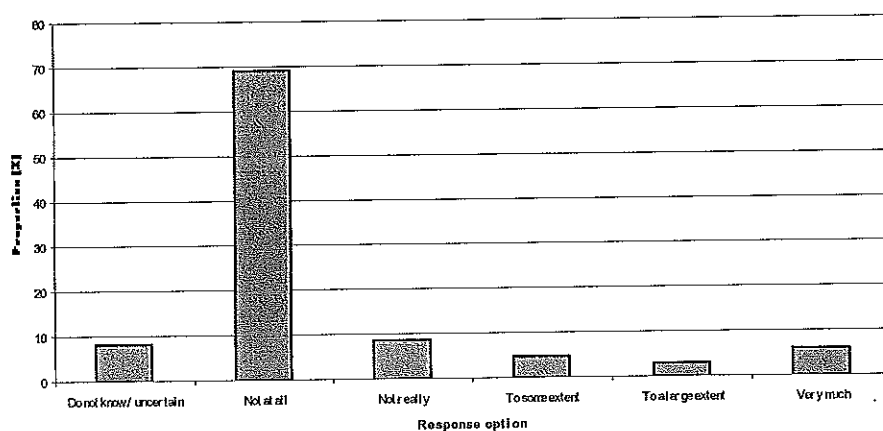
Graph 22 — Suitability of Cape Town as a place in which to be buried
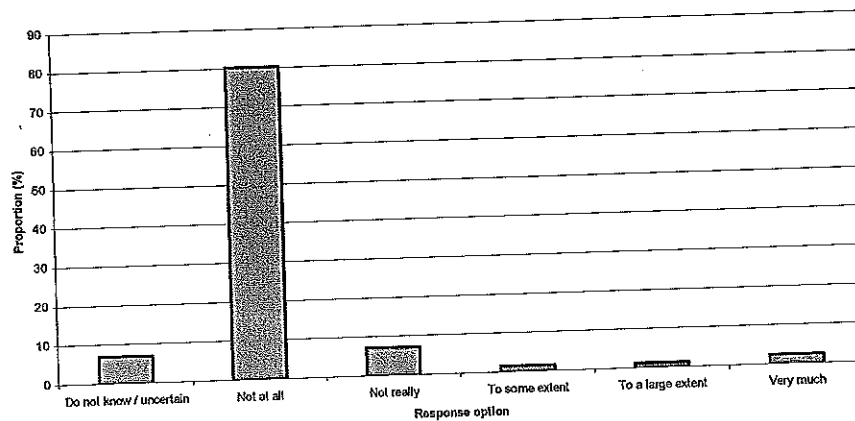
(h)   Perceptions of Cape Town: summary

As was found in the case of Johannesburg, Cape Town is clearly not regarded as an attractive place in which to live, work, retire and die. Since negative publicity cannot be blamed entirely for Cape Town's lack of perceived attractiveness, other factors should be playing a role here. The most important of these is likely to be the general lack of knowledge of conditions in the Mother City among residents in provinces other than the Western Cape.

2.4   Conclusions

Potential migrants' perceptions about their preferred destinations (which, by the way, included Johannesburg and Cape Town in a small minority of cases) are much more positive than are the perceptions about Johannesburg and Cape Town among the general population. It was expected that respondents would be inclined to rationalise about their destination choices, but the magnitude of the differences between the perceptions of potential migrants as regards the possible destination and those of the general population regarding Johannesburg and Cape Town came as a surprise. In view of the fact that Gauteng and the Western Cape are the two most popular actual migration destinations in the country, the effect of rationalisation clearly needs to be controlled for. Another factor that might have played a role here was the selection of Johannesburg and Cape Town as the specific (alternative) potential destinations. In a sense it might have been better to refer to Gauteng and the Western Cape generally instead of their metropolitan centres, but then respondents would probably have found it difficult to decide on a single response for each question, because of the diversities within these provinces.

However, while the descriptive report presented above may be useful and perhaps even important or interesting in its own right, it has very little to offer in terms of explanation. For example, what are the key characteristics of the respondents associated with these perceptions? This is the topic to be discussed next. (Another relevant question would be: What role, if any, did "social desirability" play in this regard, and can one effectively control for its effect on the responses? Unfortunately this question has to remain unanswered until such time as the confirmatory factor analyses have been completed.)

3   PLACE PERCEPTIONS: UNDERLYING PROFILES

A question that begs to be answered is therefore "What is the difference in profile of someone with a low regard for the suitability of a possible future place of residence as opposed to someone who regards that place highly?" One method that allows one to look closely at these different profiles is "multiple classification analysis" (MCA)[2], which is equivalent to multiple regression using dummy variables and does not require that the relationships between the variables studied must be linear. MCA can be used when the dependent variable is measured on an interval scale and the independent variables are all categorical.[3] Another technique, "multivariate nominal-scale analysis" (MNA)[4] is used when all the variables, including the dependent variable, are categorical. These techniques were used in the analyses that are described below.[5]

The main attractiveness of these two techniques lies in the fact that their results, unlike those of logistical regression or logit analysis, can be directly interpreted (i.e. they need not be interpreted in terms of something else), and because MCA and MNA do not produce hidden reference categories for which coefficients and other statistics are not directly available. MCA and MNA were developed for large samples where inferential statistics are not needed (or may, in fact, be misleading), and should therefore be used with circumspect in small samples with fewer than (about) 200 cases.

To summarise the findings above, I provisionally created a single variable (index) for the place perceptions regarding possible destinations by merely adding up the different perceptions (suitability as a place to raise children, as a place in which to retire and in which to be buried) regarding the three possible destination areas (i.e. the preferred destination, Johannesburg and Cape Town). This "place-perception index" may be a useful dependent variable.

The profile variables (i.e. the so-called predictors or independent variables) used in the analyses described below, were: (a) the "possible destination", (b) "level of information about the possible destination", (c) "satisfaction with life in general", (d) "current type of locality", (g) "highest educational attainment", (e) "age", (f) "gender", (h) "whether a labour migrant or not", (i) "marital status", and (j) "relationship to the head of the household".

An indication of the actual location of the **possible destination** is expected to be a key predictor of whether the place is regarded highly or otherwise. Four categories were identified: (a) "elsewhere in the current province" (as a measure of proximity), but excluding Johannesburg or Cape Town (which were treated as separate categories), (b) in a "different province" (again excluding Johannesburg or Cape Town) or "abroad" (the latter having been added here to eliminate the observed interactions), (c) "Johannesburg" (for respondents who identified the city as a preferred destination and for respondents outside Gauteng who did not have

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[2] For a detailed discussion of MCA, see Andrews, Morgan, Sondquist & Klem (1973).

[3] A distinct technical advantage of MCA is that it does not require the predictor variables to be independent – as in traditional analysis-of-variance techniques – as long as the weighted two-way frequencies of the levels of the independent variables do not have closely overlapped categories (Andrews et al. 1973:25–27).

[4] For a detailed description of MNA, see Andrews & Messenger (1973).

[5] Kok, Hofmeyr & Gelderblom (1985:64–66) provides a simplified description of these two techniques.

any plans to move), and (e) "Cape Town" (for respondents who identified the city as a preferred destination and for respondents outside Greater Cape Town who did not have any plans to move).

The predictor "**level of information about the destination**" has the five ordinal-scale categories used in the questionnaire, namely knowing: (a) "nothing whatsoever", (b) "too little", (c) "enough", (d) "a great deal", and (e) "everything there is to know". As Goodman (1981:130) correctly points out, although the spatial flow of information is important in its own right, "the concept of information is much broader than simple information about alternative locations available to prospective movers". He (1981:136) states further that knowledge of alternative locations has three components: (a) knowledge of the existence of that alternative location (which is probably related *inter alia* to one's level of education), (b) the number of aspects (characteristics) of the location about which the decision maker has some knowledge (which is probably related to the level of exposure that one has had to that location, as would, for example, be reflected by one's previous duration of stay in that location), and (c) the certainty (perceived accuracy) of the information that the decision maker has (which would, among other things, also be a function of previous exposure to that location). In this regard, social networks and personal contacts in the possible destination would clearly be a decisive factor as well, and Goodman (1981:138) confirms that people attach a higher credibility to information provided by trusted friends and relatives than by other (e.g. government or market) sources.

The predictor "**satisfaction with life in general**" is included here because it may be regarded as a determining factor as to whether people experience the need to look for alternative locations or not (see for example Wolpert 1965, Speare 1974, and Speare, Kobrin & Kingkade 1982). The five ordinal-scale categories used in these analyses were: (a) "very dissatisfied", (b) "dissatisfied", (c) "neither satisfied or dissatisfied" (under which the category "uncertain/ don't know" was included), (d) "satisfied", and (e) "very satisfied".

The reason for including the predictor "**current type of locality**" is twofold. Firstly, it may be an indication of the level and nature of exposure to alternative destinations in that people in rural settings may be influenced less by the mass media and more by personal contacts than urban residents. Secondly, the current type of locality might have important effects on other predictors used in the analyses. In these analyses four locality-type categories were used: (a) "rural" (i.e. low-density farming areas), (b) "semi-urban" (referring to concentrations of people in villages situated in outlying rural environments – see also Graaff 1986), (c) "peri-urban" (which refers to small-holdings and concentrations of people close to but outside the borders of towns and cities, and (d) "urban" (denoting towns and cities under the jurisdiction of urban local governments). (It should be remembered, though, that the classification of "semi-urban" and "peri-urban" localities was based on the subjective interpretation of the situation by the fieldwork team.)

"**Highest educational attainment**" was seen as both a potentially important predictor of place perceptions (because of its potential role in determining "awareness space" – see for example Goodman 1981) and as an important control variable because of its expected effect on the other independent variables (notably "level of information about the destination"). Three education categories were identified as potentially important: (a) "Grade 7 or lower" (denoting no education or primary-level schooling only), (b) Grades 8–11 (representing lower

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secondary-level schooling only), and (c) Grade 12 and higher (which would indicate that one has been prepared best for the information-related demands of adult life).

The demographic predictors "age" and "gender" were also included for the reason that they may be important in their own right and because they may have an effect on the other predictors. Various researchers, such as Speare (1974), De Jong & Fawcett (1981), Speare et al. (1982), and De Jong (2000), have identified life-cycle changes as important determinants of migration. "Age" was therefore categorised into the five key stages of the adult life cycle: (a) 18–24 years (denoting entry into the labour market), (b) 25–34 years (generally representing entry into marriage and the birth of a first child), (c) 35–44 years (covering the ages when children make specific demands on the size of the accommodation and have to attend school), (d) 45–54 years (representing the ages when children generally leave the parents' home), and (e) 55–69 years (which are usually associated with retirement).

The predictor "whether a labour migrant or not" was included because of the rather unique relationship that a labour migrant has with the possible destination. While away from home, the labour migrant's most likely destination would usually be the home area, and while at home the likely destination is the place where he/she worked before going home to visit. The place perceptions of labour migrants are therefore expected to be different from the rest of the adult population.

The remaining two predictors ("marital status" and "relationship to head of household") were included primarily for the reason that they may have important effects on the key predictors and were therefore seen more as control variables than anything else. "Marital status" has the following five categories: (a) "never married", (b) "married", (c) "living together", (d) widowed (widow or widower), and (e) "divorced or separated". Four "relationship" categories are used in the analyses: (a) "head of the household", (b) "spouse of the household head", (c) "parent or child of the household head", and (d) "other relationship" (covering those household members who do not have such close family connections with the household head).

The predictors mentioned above were used in all the analyses described below, and it is important to mention that the very same respondents were used in all these model applications.

3.1 Overall analysis

The dependent variable ("place-perception index") has a comparatively large number of possible values (15) and therefore may resemble a variable that is measured on the interval scale. To help with the interpretation, this sum was expressed as an index, with values ranging from 0 (minimum) to 10 (maximum). In Table 4 the detailed results of the multiple classification analysis (MCA) are presented.

Although the last four independent variables in the model do not contribute a great deal to the model's overall explanatory power, they have been retained as control variables because of their expected effects on the other six independent variables. This model explains 40 per cent of the variation (variance around the mean) in the place-perception index. It is important to note that this reflects, comparatively speaking, a good explanatory capability in the context of the social sciences (where very good model fits are the exception).[6]

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[6] The fact remains, however, that three-fifths of the variation in the "perception index" are to be ascribed to factors not covered by this model.

TABLE 4: PLACE PERCEPTIONS: RESULTS OF THE MULTIPLE CLASSIFICATION ANALYSIS (MCA)

Independent variables (in order of importance)	Category of the independent variable concerned	Number of cases	Sum of weights	Coefficient	Dependent variable (perception index) mean	
					Unadjusted (raw)	Adjusted (partial)
Possible destination	Elsewhere in current province	116	1 113 922	2,427	6,3	5,2
	A different province or abroad	189	1 229 956	1,340	4,7	4,1
	Johannesburg	1 123	6 176 008	-0,586	2,1	2,2
	Cape Town	348	2 825 665	-0,260	2,1	2,5
	Correlation coefficients [beta* and (adjusted) eta** values]:				0,49**	0,35*
Level of information about the possible destination	Nothing whatsoever	451	3 570 431	-0,723	1,8	2,1
	Too little	549	3 171 537	-0,280	2,4	2,5
	Enough	420	1 997 293	0,262	3,0	3,1
	A great deal	241	1 554 312	0,700	3,6	3,5
	Everything there is to know	115	1 051 978	1,764	5,7	4,6
	Correlation coefficients [beta* and (adjusted) eta** values]:				0,39**	0,26*
Age	18–24 years	160	1 175 504	1,101	4,1	3,9
	25–34 years	451	4 169 728	0,361	3,3	3,2
	35–44 years	496	2 510 502	-0,295	2,5	2,5
	45–54 years	378	2 012 140	-0,482	2,1	2,3
	55–69 years	291	1 477 677	-0,736	1,8	2,1
	Correlation coefficients [beta* and (adjusted) eta** values]:				0,25**	0,20*
Current type of locality	Rural	161	1 922 235	0,217	3,8	3,0
	Semi-urban	165	1 079 970	0,159	2,4	3,0
	Peri-urban	67	778 630	1,462	4,4	4,3
	Urban	1 383	7 564 716	-0,228	2,4	2,6
	Correlation coefficients [beta* and (adjusted) eta** values]:				0,24**	0,16*
Satisfaction with life in general	Very dissatisfied	221	2 182 645	0,482	3,6	3,3
	Dissatisfied	312	2 201 954	0,107	3,1	2,9
	Neither satisfied or dissatisfied	210	1 288 945	0,291	2,8	3,1
	Satisfied	737	3 828 466	-0,146	2,6	2,6
	Very satisfied	296	1 843 541	-0,599	1,9	2,2
	Correlation coefficients [beta* and (adjusted) eta** values]:				0,18**	0,12*
Relationship to head of household	Head of the household	798	4 820 553	0,123	2,8	2,9
	Spouse of household head	540	2 695 689	0,078	2,4	2,9
	Parent or child of the head	290	2 464 657	-0,558	2,9	2,2
	Other relationship	148	1 364 652	0,418	3,2	3,2
	Correlation coefficients [beta* and (adjusted) eta** values]:				0,08**	0,11*
Marital status	Never married	477	4 396 838	0,235	3,2	3,0
	Married	977	4 920 785	-0,103	2,6	2,7
	Living together	91	970 361	-0,461	2,6	2,3
	Widowed	128	639 901	-0,067	2,2	2,7
	Divorced or separated	103	417 666	-0,086	2,1	2,7
	Correlation coefficients [beta* and (adjusted) eta** values]:				0,12**	0,07*

* The *beta* value is equivalent to a partial correlation coefficient.

** The *eta* value is equivalent to an ordinary (simple) correlation coefficient, and was adjusted for the number of variables in the model.

Independent variables (in order of importance)	Category of the independent variable	Number of cases	Sum of weights	Coefficient	Dependent variable (perception index) mean	
					Unadjusted (raw)	Adjusted (partial)
Highest educational attainment	Grade 7 or lower	401	4 655 725	0,236	3,0	3,0
	Grades 8–11	624	3 825 704	-0,147	2,6	2,6
	Grade 12 or higher	751	2 864 122	-0,188	2,7	2,6
	Correlation coefficients [beta* and (adjusted) eta** values]:				0,06**	0,07*
A labour migrant?	Yes	64	671 340	-0,704	2,3	2,1
	No	1 712	10 674 211	0,044	2,8	2,8
	Correlation coefficients [beta* and (adjusted) eta** values]:				0,03**	0,06*
Gender	Male	771	6 029 606	0,021	3,0	2,8
	Female	1 005	5 315 945	-0,024	2,6	2,8
	Correlation coefficients [beta* and (adjusted) eta** values]:				0,07**	0,01*

Number of cases on which the analysis is based: 1 776 (Total sum of weights: 11 345 551)
Mean of the dependent variable (perception index): 2,8
Standard deviation of the dependent variable: 2,8

Proportion of variation in the dependent variable explained by this model: 40%
Multiple correlation coefficient (adjusted for the number of variables in the model): 0,62

*   The *beta* value is equivalent to a partial correlation coefficient.

**   The *eta* value is equivalent to an ordinary (simple) correlation coefficient, and was adjusted for the number of variables in the model.

As would probably be expected, the most important predictor of place perceptions is the possible destination itself. Respondents who considered moving to another area in the same province (excluding Johannesburg or Cape Town) clearly had the highest overall regard for the possible destination in both raw (unadjusted) and partial (adjusted) terms. The respective means (6,3 and 5,2) are notably higher than for the other destination categories. It is important to remember that this is the case *even after the effect of different knowledge levels about the possible destination has been eliminated.* Johannesburg and Cape Town clearly featured worst (in raw terms the perception-index means are 2,1 for both), although Cape Town seems to be performing marginally better than Johannesburg when the effects of the other independent variables are removed (2,5 for the former as against the latter's 2,2).

The second most important predictor of place perceptions is the level of information about the possible destination. The less respondents knew about the area, the lower their overall regard for the place (in both raw and partial terms). An expected, yet very interesting, picture emerges from the analysis of age (which represents the third most important predictor): the older one gets the more negatively one tends to rate possible alternative destinations.

Despite the rather subjective nature of the classification of localities (the fourth most important predictor), it is interesting to note that respondents living in peri-urban areas seem to have a notably higher regard for alternative areas of residence than those living in urban areas ("proper"). The sentiments of people in rural areas or the "deeper" semi-urban settlements tend to fall between the residents of peri-urban and urban areas. It might have been ex-

pected that people in rural and outlying semi-urban environments would be more negative towards alternative places of residence, but this is clearly not the case.

Although no clear *general* pattern emerges from an analysis of the fifth most important predictor, namely "satisfaction with life in general", it is important to note that respondents who were "very dissatisfied" with their lives at the time of the survey, were clearly looking for alternatives to escape their situation, and migration might have been one of the options being considered at that point. As would be expected then, those being "very satisfied" with their lives were less willing to accept that other possible areas of residence could offer suitable alternatives as places in which to live.

It is interesting that "education" (third least important predictor), being a "labour migrant" (second least important predictor) and "gender" (least important predictor) had no noteworthy predictive capabilities. Although all three were included for their control effects as well, this finding indicates that their *only* (possible) effects are, in fact, to influence the partial effects of the other predictors on the place-perception index.

Not much needs to be said about the only remaining predictors, namely "marital status" and "relationship to the head to the head of the household", because these variables were included not because of their predictive powers but to control for the potential effects that they may have on the main predictors. It is interesting, nevertheless, that "relationship to the head" emerged as the sixth most important predictor in our model, and it seems that if one is not a close relative of the household head one is potentially more mobile and an opportunity therefore exists to view possible alternative areas of residence in a more positive light than those closer to the head of the household. Labour migrants are less positive about other places than the rest of the population, and women have the same perception levels as men.

3.2   Revisiting the three individual "place perception" variables

3.2.1 Purpose

Although the general model has produced quite useful results, it would be important to make sure that the perception index used as the dependent variable in that model has sufficient validity. I therefore also had to look individually at the three variables comprising the previously described model of overall place perceptions. The underlying question is therefore: To what extent is the perception index that was developed a valid reflection of the perceptions regarding the suitability of the possible destination as a place in which to (a) raise children, (b) retire, and (c) be buried?

In these cases the dependent variables are clearly categorical, and for such analyses the other statistical technique mentioned above, namely MNA, can be used effectively. As with MCA, all the predictors are categorical, but in the case of MNA the dependent variable must also be categorical.

In these analyses it is attempted to find answers to the question "What are the main characteristics of the respondents associated with perceptions regarding the possible destination as a place in which to (a) raise children, (b) retire, and (c) be buried?" Since the comparison of the results of these analyses with the findings reported in the previous section are more important than the detailed results of the individual analyses, these details are not provided in the appendix but are available from the author.

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3.2.2 MNA statistics

The bivariate Theta and generalised Eta-squared values given in the appendices,[7] measure the strength of the simple bivariate relationship between the dependent variable and the predictor concerned. The bivariate Thetas are indications of the proportion of the sample correctly classed when using only the mode of the dependent variable categories for prediction purposes, while the squares of the generalised Eta-squares measure the "...ability to explain the variance of each dependent variable code dichotomised against all others" (Andrews & Messenger 1973:31).

3.2.3 Comparing the results

The best prediction is obtained in the model dealing with perceptions regarding the suitability of the possible destination for *retirement* (with an R-squared value of 24%), followed closely by the model for predicting the suitability of the possible destination as a place in which to be *buried* (R-squared = 22%). In the case of the model that aims to predict perceived suitability of the possible destination for raising children, the predictive power is much weaker (R-squared = 14%). What these findings boil down to is that, although the variables included here are better suited to predict perceptions of the suitability of possible destinations as places in which to retire or to be buried in than for perceptions regarding their suitability to raise children, they do not account for much more than one-fifth of the variation in place perceptions in any of the models. Other factors, not covered by the models, account for more than three-quarters of that variation.

An inspection of the detailed results from the three MNA models showed no important deviations from the picture sketched by the more general MCA model described in Section 3.1, where the constructed "perception index" was used as dependent variable, and not one of the MNA models provided a better predictive capability than the MCA. The validity of the perception index has therefore been established – at least for this particular context.

4   SUMMARY AND CONCLUSIONS

Place perceptions are not only important determinants of migration patterns but the concept itself is also useful for studying the images that people have of different places. This paper dealt specifically with the latter. It has looked specifically at people's perceptions regarding different possible destinations as places in which to live, work, retire and die.

Mental maps, which reflect people's graphic images of different places, represent a sub-set of place perceptions and have been shown in the literature as difficult to construct and is consequently not a suitable concept to apply in questionnaire surveys. A second-best option, therefore, was to borrow from the SAMP idea of asking people about the suitability of alternative possible destinations as places in which to live and work, retire and be buried (see McDonald 2000). In this study we looked at the preferred destination, Johannesburg and Cape Town, the latter two being the economic centres of the two most popular provincial migration destinations in South Africa.

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[7] In the analyses described in the appendices, all substantial *first*-order interactions in the data were removed. However, it was not determined whether any *higher*-order interactions might actually be present. Nevertheless, there is no logical or theoretical base suggesting that significant second or higher-order interactions could be present in the data, but this is of course no guarantee that such contingency effects are in fact absent.

The analyses showed that the preferred destinations are regarded as much more suitable (for living, raising children, working, retiring and dying) by potential migrants than are the perceptions of Johannesburg and Cape Town held by the general adult population. In an attempt to obtain a profile of the persons having these positive or negative perceptions, I undertook some multivariate statistical analyses.

A perception index was constructed to serve as the dependent variable for a multiple classification analysis (MCA) that was undertaken. The validity of the perception index was tested and confirmed by looking individually at the three future-oriented place-perception components studied here, namely the suitability of different areas as places in which to raise children or grandchildren, retire and being buried.

The application of the MCA model confirmed that Johannesburg and Cape Town are in fact perceived more negatively than the preferred destination, and that the higher the level of information about the possible destination the higher the ratings on the perception index. Place perceptions become more negative with an increase in age and level of satisfaction with life in general. The comparatively small number of respondents in "peri-urban" areas (that are close to yet outside town) rated highest on the perception index, followed relatively far behind by persons living in rural and "semi-urban" areas (the latter being outlying concentrations of people in non-urban villages). Household heads and their spouses, parents and children were found to be slightly less positive about different places than non-related household members.

Although the differences are less pronounced, it was also found that never-married persons tended to be more positive compared to their counterparts who were or had previously been married or living together. An increase in educational attainment is associated with a decreased rating on the perception index, and labour migrants also tend to have a lower regard for other places than do the rest of the population. No difference was found between the perception levels of men and women.

These findings clearly highlighted the complexity of studying place perceptions. Mental maps are described in the literature on the topic as "subjective and culturally influenced", but it seems that the subject-specific nature of (the more generally defined) "place perceptions" makes it equally difficult to generalise.

Further research is clearly needed. It would, for example, be important to compare these findings with those obtained from multivariate analyses of people's value-expectancies that also control for the effect of social desirability. To what extent would the above rough-and-ready reflections of place perceptions be corroborated by findings that have incorporated the more sophisticated value and expectancy components? (Due to the fact that the required confirmatory factor analyses have not yet been completed, these analyses could not be readily undertaken for the purposes of the current paper.)

It would of course also be important to compare the respondents' (future) actual migration destinations with the perceptions reported here, and to determine why some people rate Johannesburg and Cape Town so negatively yet more often than not do end up there themselves. A longitudinal survey would of course be needed for this purpose, and the current study has paved the way for precisely such a future follow-up survey.

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APPENDIX

PERCEIVED SUITABILITY OF THE POSSIBLE DESTINATION: RESULTS OF THREE MULTIVARIATE NOMINAL-SCALE ANALYSES

In Table A the statistics in respect of the overall model for "suitability of the possible destination for raising children" are provided.

TABLE A: **PERCEIVED SUITABILITY OF THE POSSIBLE DESTINATION AS A PLACE IN WHICH TO RAISE CHILDREN: STATISTICS PRODUCED BY THE MNA MODEL**

Independent variables (in rank order of importance)	Bivariate Theta	Generalised Eta-squared
Possible destination	45%	6%
Level of information about the possible destination	42%	4%
Age	40%	2%
Current type of locality	40%	1%
Relationship to the head of the household	40%	1%
Satisfaction with life in general	38%	1%
Marital status	37%	1%
Gender	37%	1%
Highest educational attainment	37%	0%
A labour migrant?	37%	0%
Complete model (overall analysis)	52%*	14%**

*   For the complete model (i.e. the overall analysis), the Theta is a multivariate measure of the proportion of cases correctly classified by the model.

**   For the complete model this value represents the generalised R-squared, which measures the proportion of the variation in the dependent variable being explained by this model.

Since not one of the bivariate Thetas in Table A is as high as the multivariate Theta (52%) nor the generalised Eta-squared values as high as the generalised R-squared (14%), one may conclude that the predictors in combination contribute something to the prediction of the dependent variable over and above the predictive power of any one predictor on its own. It should be clear from the generalised Eta-square values, however, that the predictive powers of labour-migrant status and education are practically zero. The bivariate Thetas indicate that gender and marital status also have virtually nothing to contribute in terms of predictive power. These four variables should thus, once again, be treated as control variables.

In Table B the statistics in respect of the overall model for "perceived suitability of the possible destination as a place in which to retire" are provided. In this case a much better goodness-of-fit statistic (the generalised R-square value, depicted in the very last cell of Table B) has been obtained with exactly the same respondents and independent variables as in the previous case. The differences in perception about the suitability of alternative places for retirement are thus clearly more pronounced in terms of the respondents' characteristics than in the previous case, which dealt with the perceived suitability for raising children.

TABLE B: PERCEIVED SUITABILITY OF POSSIBLE DESTINATION AS A PLACE FOR RETIREMENT: STATISTICS PRODUCED BY THE MNA MODEL

Independent variables (in rank order of importance)	Bivariate Theta	Generalised Eta-squared
Possible destination	62%	13%
Level of information about the possible destination	57%	7%
Current type of locality	55%	3%
Age	53%	3%
Satisfaction with life in general	53%	2%
Marital status	53%	1%
Relationship to the head of the household	53%	1%
Highest educational attainment	53%	0%
Gender	53%	0%
A labour migrant?	53%	0%
Complete model (overall analysis)	65%*	24%**

*   For the complete model (i.e. the overall analysis), the Theta is a multivariate measure of the proportion of cases correctly classified by the model.

** For the complete model this value represents the generalised R-squared, which measures the proportion of the variation in the dependent variable being explained by this model.

In Table C the statistics in respect of the overall model for "perceived suitability of the possible destination as a place in which to be buried" are provided.

TABLE C: PERCEIVED SUITABILITY OF POSSIBLE DESTINATION AS A PLACE IN WHICH TO BE BURIED: STATISTICS PROVIDED BY THE MNA MODEL

Independent variables (in rank order of importance)	Bivariate Theta	Generalised Eta-squared
Possible destination	68%	10%
Level of information about the possible destination	68%	8%
Current type of locality	65%	5%
Age	65%	4%
Satisfaction with life in general	65%	2%
Relationship to the head of the household	65%	1%
Marital status	65%	1%
Highest educational attainment	65%	1%
Gender	65%	0%
A labour migrant?	65%	0%
Complete model (overall analysis)	71%*	22%**

*   For the complete model (i.e. the overall analysis), the Theta is a multivariate measure of the proportion of cases correctly classified by the model.

** For the complete model this value represents the generalised R-squared, which measures the proportion of the variation in the dependent variable being explained by this model.

From Table C it should be clear that although the perceptual differences in the suitability of the possible destination reflected here (i.e. for being buried) are somewhat less pronounced than in the previous case (for retiring), they are still much prominent than in the case of Table A (i.e. for raising children).