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*Fertility and living arrangements in South Africa**

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Abstract

This paper investigates fertility among African women in South Africa. Variation in fertility levels is influenced by such factors as rural or urban residence, and level of education and household income. Differential fertility between women of different language groups is accounted for largely by underlying socio-economic factors. A further factor investigated by this paper is the impact of household structure on fertility in South Africa using the 1993 South Africa Living Standards and Development Study. Household structure is examined from the perspective of women. We focus on whether women live with a husband, whether they live with relatives of their parents' generation, and whether they live with relatives of their own generation. The analysis concentrates on women aged 20 or over who are already mothers. For these women, we hypothesise that living arrangements mediate between their socio-economic and cultural characteristics and the number of children that they have borne.

Living with relatives from the previous generation has a negligible net impact on the lifetime fertility of mothers. However, women who live with relatives from the same generation have borne about a fifth fewer children than other women of the same age after controlling for the impact of household income, the woman's schooling, regional differentials and urban-rural residence. Nguni-speaking women have relatively large families. This largely reflects economic and educational disadvantage but is conditional on women's living arrangements. Unmarried and separated mothers have about a fifth fewer children than married mothers of the same age.

It is within the domestic context that the influence of other characteristics is transmuted into differences in numbers of children. Women's living arrangements have become more diverse over the past thirty years in South Africa. They both modify and mediate the effects of other factors on fertility.

Keywords: South Africa, fertility differentials, living arrangements, households.

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Introduction

Fertility is lower in South Africa than in any other country in sub-Saharan Africa. By 1996, the total fertility rate had dropped to about 3 children per woman¹. The fertility of the black African population began to fall in the 1950s or early 1960s, far earlier than elsewhere in the region². By 1988, about 44 per cent of black South African women were using contraception³.

Although the fertility transition in South Africa is more advanced than that in any other sub-Saharan African country, it has been relatively little studied. In part, this reflects a feeling that the economic development of South Africa and its differing demographic conditions set it apart from other countries in the region. In addition, during the apartheid years the country was excluded from the remit of most international and development aid agencies and from international programmes of demographic research. During this period, moreover, the South African government made only limited efforts to collect data on the fertility and mortality of the black African population⁴. Much of the demographic research that was undertaken was designed expressly to serve the political needs of the then government⁵ and few independent analysts obtained access to those primary data that were collected.

The political changes that occurred in South Africa during the 1990s were accompanied by a growth in interest in the demography of the country. At least an outline account now exists of the recent history of fertility and of some of the factors that have influenced its course⁶. Much less has been done to document differentials in fertility within the majority population and to relate these to the institutional context within which black South Africans lead their lives. This paper contributes to that enterprise. In particular, it places fertility differences by region, residence, education and language group in a life-course perspective and focuses on women's living arrangements as the nexus between reproduction and society.

The main source of data used is the 1993 South Africa Project for Statistics on Living Standards and Development Study (LSDS), conducted by the South African Labour and Development Research Unit at the University of Cape Town in association with the World Bank⁷. The questionnaires and protocols were based on those developed for the World Bank's Living Standards Measurement Study. The LSDS is primarily an income and expenditure survey but collected valuable data on demography, health, and other subjects. In particular, it asked women aged 15-49 how many children they had borne.

The LSDS was intended to provide representative data on the population of the whole of South Africa, including the then TBVC 'states'. It covered labour migrant hostels, as well as private

households, but not other communal establishments. A two-stage cluster sample design was adopted based on Census Enumerator Sub-Districts. Data were obtained on a resident population of 40 343 individuals, including 9 268 black South African women of childbearing age. It is known that interviewers failed to complete fieldwork in some clusters and that there was under-sampling and a relatively high level of non-response among the white population. The analyses presented here use the *RSWEIGHT* variable to adjust for these biases.

This paper describes differentials in lifetime fertility within the black African population of South Africa; examines the different types of household in which women of childbearing age live; and investigates the ways in which residential arrangements mediate between women's other characteristics and their reproductive histories. The first section of the paper looks at some of the major factors that influence the lifetime fertility of black African women, including language group, region, residence, schooling, and household income. The paper then turns to the living arrangements of women of childbearing age. It reviews some of the issues and conceptual difficulties that have hampered work on the household in sub-Saharan Africa, sets out a taxonomy of women's living arrangements, and applies this taxonomy to the 1993 LSDS data. The third section of the paper examines associations between living arrangements, other attributes of women and fertility outcomes. It argues that the direction of causality between a woman's living arrangements and her fertility depends largely on whether she has had children or not. The final section of the paper attempts to integrate the preceding sections into a coherent picture of the association between living arrangements and fertility among women of childbearing age in South Africa, and situates this association in its social, political and economic context.

Factors influencing the family size of black African women

Table 1 presents the mean numbers of children ever-born to black South African women of different ages. While many of the younger women will go on to bear further children, it is likely (given the downward trend in current fertility in South Africa⁸) that their completed family sizes will be much lower than those of women who were in their forties in 1993.

{TABLE 1 ABOUT HERE}

Table 2 shows both the distribution of black South African women according to several spatial, social, economic and cultural characteristics and differences in women's lifetime fertility according to these characteristics. The table presents ratios of the mean numbers of children ever-born by different groups of women. The ratios measure childbearing relative to a reference

group (usually the largest group). A value of 1 implies the same level of fertility as in the reference group, while values above and below unity imply that women with those characteristics exhibit higher and lower levels of fertility respectively than the reference group. We present ratios because, although women's family sizes increase with age, the ratios do not vary significantly with age for the characteristics that we examine. For example, both women in their twenties and women in their forties in urban areas have about 81 per cent as many children as women in rural areas. Hence, age can be excluded from the analysis and the ratios calculated from data on all women aged 20 to 49⁹. The middle column of results shows gross differences in women's lifetime fertility by each characteristic in turn. The right-hand column shows the net impact of each factor, controlling for the impact all of the other characteristics examined in the table¹⁰.

{TABLE 2 ABOUT HERE}

One can see from Table 2 that the lifetime fertility of black African women in South Africa varies markedly with residence. At any age, women living in the rural parts of the country have borne the most children and women living in metropolitan areas the fewest¹¹. As the last column of results shows, about half of this residential differential in family sizes is accounted for by variation between residential zones in the other characteristics of black Africans considered here¹². Furthermore, after controlling for other effects, little difference exists between the lifetime fertility of women in urban and metropolitan areas. Similarly, while Nguni-speaking women, in general, have borne more children than other African women of the same age, this difference almost entirely disappears when one controls for where women live and their incomes and education. The value of examining both the gross and net effects of these social, spatial and economic variables on fertility thus becomes clear. It was noted as early as 1983 in a report to the South Africa President's Council, for example, that Nguni-speaking women had higher fertility than Sotho speakers¹³. Our results indicate that, once other associations have been allowed for, ethnicity is not a particularly important marker or predictor of fertility.

The impact of household income and schooling on women's lifetime fertility do not alter much when one controls for language and where women live, as can be seen from the similarity of the net and the gross ratios. Educated women living in households with a monthly income of R1500 or more have the smallest families. However, the net effect of each of these two characteristics substitutes somewhat for that of the other. Thus, the impact of schooling on lifetime fertility is greatest among the poor, while the effect of household income on fertility is greatest among women with no schooling.

African women living in what were the 'white' areas of the country during the apartheid years tend to have fewer children than women of the same age living in areas that used to be 'homelands'. Urbanisation, schooling and household income account for some but not all of these geographical differences in women's family sizes across South Africa. Some significant regional differences in lifetime fertility persist in the net effects: women have fewer children than average in the old Cape and Natal provinces and relatively large families in Lebowa and Transkei. The net and gross ratios for Ciskei are implausibly low.

Living arrangements of women of childbearing age

Households and family structures

Although a large literature exists on household forms and structure in sub-Saharan Africa¹⁴ the concept of the household remains beset with conceptual and definitional problems. The foremost of these is to define what constitutes a household. A second problem relates to the definition of household headship and a third to the manner in which female-headed households are conceptualised. This paper does not deal with all three questions in detail. However, a brief discussion of these issues is needed to explain the taxonomy of living arrangements that we adopt.

To define what constitutes a household is probably even more difficult in South Africa than in other sub-Saharan African countries. The migrant labour system, combined with the strict controls on urbanisation that existed from the 1920s through to the 1970s have resulted in what have been labelled 'stretched households', that is domestic units that are connected across space by kinship and remittances of income¹⁵. In this formulation, the 'household' is no longer a spatially discrete entity, but one that exists simultaneously in multiple spaces, economies, provinces and urban/rural morphologies. Stretched households create problems for all surveys, the 1993 LSDS included, that view the household as a spatial and physical entity, with household membership being defined by duration of residence in the household over a stated period of time. The LSDS counted as household members everyone who had lived in the household for 15 days of the last year if they ate together when coresident and pooled resources. However, to avoid double counting, interviewers only collected detailed information, including that on fertility, about individuals who had spent the majority of the last month in the household where they were enumerated. Thus, although the LSDS allows one to begin to study the prevalence of stretched households, differentials in fertility can only be examined for coresidential groups.

The definition of the head of a household is equally fraught with conceptual difficulty. As Budlender has noted, the use of attributes of the household head as an analytical tool presupposes the existence of a single head rather than collective decision-making and confers a special status on household heads that they might not possess¹⁶. The LSDS avoids imposing an arbitrary definition of headship by accepting as the head the person nominated by the primary respondent (who may or may not be the head). The disadvantage of this is that one cannot distinguish between patriarchal headship and headship conferred by authority or income earned, or between *de facto* and *de jure* headship. More generally, no way exists of discerning the criteria used to determine headship.

Third, much of the literature on female-headed households adopts an overly simplistic mode of analysis. Many such households arise when women are widowed, abandoned, or divorced and many of them are very poor. It is dangerous, however, to view all of them as such. Female-headed households may arise as a result of decisions made and actions initiated by women to achieve their economic and social ends. Van der Vliet describes how perceptions of, and attitudes towards, modernity and traditionality (and any conflict inherent in this binary) are deeply gendered in a South African context, and how women, especially in urban areas, have tried systematically to claim greater autonomy and freedom for themselves and, in so doing, break out of historical patriarchal and social constraints¹⁷. Muthwa also observed in Orlando East in Soweto that for many female household heads the perceived advantages of marriage are outweighed by its disadvantages¹⁸. Heading a household (while socially fraught and an ambiguous status in many ways) gave women increased freedom, independence and scope for financial planning and budgeting, even if their material well-being did not improve. Thus, while most female-headed households in her study had originated in marital breakdown, the woman had initiated the split more often than her husband.

These observations, combined with the limitations imposed by the LSDS data, have led us to avoid taxonomies of living arrangements predicated on gender, household headship and household membership analysed from the perspective of the household head. Nevertheless, as the following section shows, we do take the specific living arrangements of women vis-à-vis their partners into account in the taxonomy applied to the data.

A classification of women's living arrangements

In order to understand patterns of fertility, we concentrate on the relationships (both through birth and marriage) that women of reproductive age have with other members of their household, as opposed to examining the structure of the household from the perspective of the household head. The rationale for this approach lies not only in making women of childbearing

age the primary unit of analysis. We also assume that fertility is contingent on the entitlements and obligations (physical, temporal, emotional or material) of women of reproductive age and that these depend in part on the numbers of household members of the woman's own or parent's generation in the household. Moreover, conventional classifications of household structure reflect women's fertility histories as much as they shape them. For example, two-generation households become vertically extended as soon as any woman in the second generation bears a child.

Therefore this analysis differentiates the living arrangements of women according to:

- the presence or absence in the household of her husband;
- the presence or absence in the household of relatives of her own generation (for example, brothers, sisters-in-law, or cousins);
- the presence or absence in the household of relatives of her parents' generation (for example, her father or aunts).

The resulting classification has eight possible categories. While one can always establish from the data whether or not a woman is living with her husband and whether or not her parents are present, a further four categories were required for the few women who could not be classified adequately according to the other criteria. This was usually because they were coded in the original data as an unspecified relation of the household head, a household helper, a lodger, or an extraneous (unrelated) member of the household. However, even if women had a well-defined relationship to the household head, it was occasionally impossible to ascertain whether and how they were related to everyone in the household. For example, no specific term exists in English (the medium used for the coding of the questionnaires) for the relationship that exists between the head of a household, and his or her children's parents-in-law. Where definitive relationships could not be identified from the data, we assume that no such relatives belonged to the household. As a consequence, the data is probably slightly biased towards the "No others" category. However, examination of the raw data suggests that the undefined relationships are uncommon, and do not distort the results derived in any meaningful way¹⁹.

{TABLE 3 ABOUT HERE}

Distribution of women according to living arrangements

The distribution of black African women according to this taxonomy of living arrangements is shown in Table 3. Only 26.5 per cent of women aged 15-49 live with their husband but have no other relatives in the same household, either of their own or their parents' generation. Most, but not all, of these women are living in what are often described as nuclear families. By contrast,

47.3 per cent of women are either unmarried or separated from their husband but live with both a relative of their parents' generation and with kin (either by birth or marriage) of their own generation. Most such women are living with at least one parent and their siblings. Almost all the women who are reported to be household heads are found, unsurprisingly, among the 11.5 per cent of the sample who live with neither a spouse nor a relative in their parents' generation.

Living arrangements by age

The data presented in Table 3 hide the age-dependency of living arrangements. Table 4 shows that the living arrangements that women typically experience are related to their progression through the key life-course events, such as first birth, marriage and marital breakdown or widowhood. The great majority of women aged between 15 and 19 are still living in the parental home with their siblings but women in their twenties display a highly varied pattern of living arrangements. Nevertheless, slightly more than half of them still live in the parental home with their siblings.

More than half of all women in their thirties are living with their husband, mostly in nuclear household arrangements. A quarter are still living with members of their parent's generation and their own generation, while one tenth of them are living with neither a spouse nor other relatives: most of these women are lone mothers. Some reduction in this diversity of living arrangements occurs among women in their forties: nearly three quarters of these women are living either in a nuclear household or alone with their children.

{TABLE 4 ABOUT HERE}

Further variation in women's living arrangements occur between households in rural, urban, and metropolitan areas as is shown in Figure 1. In rural areas, more than twice as many women aged between 25 and 29 live with a member of their parents' generation (denoted $G(-1)$) and members of their own generation (denoted $G(0)$) than live with just their husband. By contrast, in metropolitan areas almost as many women of this age are living with their husband and no other relatives as live with the parental generation. As marriage is unlikely to occur earlier in urban than rural areas, neolocal residence on marriage is probably more common in cities. While only 3.6 per cent of women in metropolitan areas aged between 25 and 29 live with both a relative from their parents' generation and their husband, the corresponding proportion for women in rural areas is 8.7 per cent.

{FIGURE 1 ABOUT HERE}

Some authors argue that the literature on the demography of households should take greater account of, and pay greater attention to, multiple couple families²⁰. However, few South African

women live in such households. In households in which the household head is aged less than 40, siblings, their spouses, cousins, and the spouses of the head's children account for around 20 per cent of household members. However, this seems to be a transitional arrangement. Such individuals account for only around 7 per cent of household members by the time the head is aged between 50 and 59 and for even fewer when the head is aged 60 or more. Equally, as Table 5 shows, only a few women live with their parent(s)-in-law and this proportion falls quickly with age.

{TABLE 5 ABOUT HERE}

It is evident though, that women's living arrangements are contingent on the stage of the life-course that they are experiencing. Women's living arrangements are the outcome of a dynamic process that is influenced by the economic, social and political forces that bear on them. Analyses of the demography of households need longitudinal data to form a fuller picture of changes in women's changing arrangements. As Kertzner points out, 'the household should be understood as the continuously changing product of the interaction of the group of individuals of whom it is comprised'²¹. Much the same argument applies to the analysis of women's living arrangements.

The relationship between women's living arrangements and their fertility

Causality between living arrangements and fertility outcomes

The determination of causal priority is central to any analysis of the association that exists between fertility and living arrangements. Clearly, the two are intimately connected and conditioned reflexively by each other. However, we posit that the relationship between living arrangements and fertility outcomes has two distinct modes.

The first applies to childless women. For this group we believe that it is either marrying that leads to both changes in living arrangements and the initiation of childbearing or becoming a mother itself that leads women to move into new household forms. Although premarital fertility in South Africa is high, most first births follow marriage and residence on marriage is usually neolocal²². By contrast, the living arrangements of women who are already mothers may affect the numbers of additional children that they bear. While these two modes are obviously stylised, viewing mothers and childless women as distinct groups can benefit understanding of the interplay between fertility and living arrangements.

Childless women

Table 6 examines the proportions of women who are childless by their age and living arrangements. It shows that the great majority of black South African women start childbearing before age 30. Equally, while most women in their twenties have become mothers even if they are unmarried, a significant minority of them remain childless. In part because of differences in ages at marriage, women start childbearing markedly later in urban and metropolitan areas than in rural areas. Whereas 28 per cent of women aged 20-24 in rural areas are childless, the comparable figures for urban and metropolitan areas are 42 and 46 per cent respectively. Even after controlling for marriage, however, women who live with other members of their own generation are less likely to have had a child than women living with no other such members in the household.

{TABLE 6 ABOUT HERE}

Looking at this another way, the living arrangements of mothers differ significantly from those of childless women (Table 7). As one would expect, childless women are much more likely to be living with their parents, with other relatives of their parent's generation or with relatives of their own than women who have already had a child, even after partially controlling for age. Likewise, and not surprisingly, childless women are far less likely to live with a husband than women who have become mothers.

{TABLE 7 ABOUT HERE}

The fertility of mothers

Table 8 examines the net impact that women's characteristics have on their number of children using the same index as Table 2 but restricting the analysis to mothers, that is all women who have already borne at least one child. The impact of variations in childlessness on overall differences in women's family sizes can be assessed by comparing the effects in the final column of Table 2 with those in the first column of Table 8. This comparison shows, for example, that higher levels of childlessness account in part for the lower mean lifetime fertility of women living in urban and metropolitan areas.

{TABLE 8 ABOUT HERE}

Living arrangements and the lifetime fertility of mothers

Presence of a husband

The second column of Table 8 shows that, net of other factors, unmarried and separated mothers have 22 per cent lower lifetime fertility than mothers of the same age who are living with their husband. Looking down the rest of the column, it is clear that part of the reason why urban women and women of higher socio-economic status have rather few children is that they are less likely than other women to have husbands present in the household. However, socio-economic and geographical differentials in fertility remain substantial even after controlling for differences in the proportion of women who live with a partner.

Investigation of the impact on childbearing of other aspects of the living arrangements of mothers reveals that they modify the extent to which lifetime fertility is reduced among women living without a husband. The final columns of Table 8 show that mothers who live with relatives of the same generation have fewer children than those who do not. This effect operates both for married women, who tend to live with their brothers-in-law and their families, and for unmarried and separated women, who tend to live with their own siblings. It is particularly large for the latter group. Some of the women who are living with relatives of their own generation also live with their parents or parents-in-law. Somewhat surprisingly, however, after controlling for coresidence with relatives of the same generation, living with relatives in the previous generation turns out to have no independent effect on how many children women have borne. Thus, no significant fertility differentials exist according to whether the household is vertically extended. It is lateral extension of the household that affects the number of children that women have borne. Further investigations showed that whether the mother is the household head (or the spouse of a household head), rather than a more distant relation, has no impact on her lifetime fertility. Thus, the differentials cannot be explained by arguing that the (possibly more insecure) position within the household of more distant relatives of the household head leads them to have fewer children, while heads and the spouses of heads exhibit higher fertility. Taken together, the fact that neither vertical extension of the household, nor being head (or married to the head) of the household, affects women's fertility makes it unlikely that the lower fertility of women in laterally extended households is explained by household heads with only a few children being more likely to let own-generation relatives live with them than their counterparts who have more children and, typically therefore, less space and money to share.

Residence and living arrangements

Nuclear family households and lone-mother households are relatively common in metropolitan areas, and extended households most common in rural areas. As Table 8 shows, the small

residential differential in women's lifetime fertility that persists after controlling for socioeconomic status, childlessness and marital status hides a much larger residential differential in fertility among women who are not living with relatives of the same generation²³. Women who live in laterally extended households, by contrast, have fewer children than other women no matter whether they live in a rural, urban or metropolitan area. The selective migration of women could affect residential differences in family size. However, the impact of this is probably small. The LSIDS collected data on women's place of residence five years previously. The answers to this question are a crude indicator of migration patterns as they fail to capture any circular migration that occurred during the reference period. Nevertheless, it is clear that only a few women moved between rural, urban and metropolitan areas between 1988 and 1993 (Table 9). Women's mobility falls with age. Even at young ages, however, the proportion of women moving between residential zones is small. In total, only 5.5 per cent of women of childbearing age moved in the five years prior to the survey and the majority of these moves were within the same residential zone.

{TABLE 9 ABOUT HERE}

Language and living arrangements

Examination of the joint effect of reported "mother-tongue" and presence in the household of relatives of the woman's own generation shows that fertility varies between women of different linguistic families, but that these variations remain hidden until one controls for the presence of other kin of the woman's own generation. As with residence, the fertility of mothers who live with relatives of their same generation does not vary greatly by language group. They all tend to have relatively few children. Women who do not live with relatives of the same generation have more children, by contrast, and this effect is particularly large for women who speak Nguni languages.

Discussion

Substantial differences exist in patterns of commencement of childbearing in South Africa between African women in rural areas and those in urban and metropolitan areas. Almost half of all women in metropolitan areas aged 20-24 have yet to have a child, compared with slightly more than a quarter in rural areas. However, residential differences in fertility are not explained completely by this, lower marriage or differences in levels of schooling and education. Other aspects of life in urban areas must account for the persistent residential differential in fertility among women who do not live with relatives of the same generation.

Women who live with relatives of their own generation tend to have fewer children than other women, even after controlling for their marital status and other possible confounding influences on fertility. This runs counter to intuition on many levels. First, if the explanation of this phenomenon depends on the exigencies of physical space and privacy within the household, it would imply that women living with kin of the same generation are less likely to “farm out” their children to grandparents than women who do not live with their siblings and cousins. This seems unlikely, and additionally so since the method of investigation of relative fertility relies on reported children ever borne, not on the actual presence (or otherwise) of children in the household.

Second, the observation runs counter to economic theories of fertility. These theories of fertility would suggest that co-residence with relatives gives women greater access to resources (human, financial, and temporal), and yields economies of scale and opportunities for a finer division of labour within the household, thus encouraging them to have more children. For the unmarried group it may be that women who revert to living with relatives of their own generation on divorce, abandonment or widowhood have chosen to limit their fertility, whereas women who live as lone mothers are more motivated to establish new marital relationships that may involve bearing children.

Further investigations show that the fertility-reducing effect of coresidence with relatives of the same generation is not dependent on the status of the woman in her household: the reduction is as marked for women who are the head of the household or the spouse of the household head as it is for women in less obvious positions of power or authority within the household. In many ways, then, these are definitionally low-fertility households. One possible explanation might be that women who have *chosen* to have fewer children share with like-minded kin, as a variant on household survival strategies. We are aware of no empirical research that tackles these areas, but the findings do suggest a profitable line of micro-level research.

Third, and again counter-intuitively, once one has allowed for whether a woman lives with relatives of her own generation, the presence or otherwise in the household of parents, parent-in-law, or other kin of that generation makes little difference to her fertility. In combination with the previous findings, this suggests that the true marker of an ‘extended household’ is the presence of kin of the same generation i.e. lateral extension, rather than vertical extension.

While we acknowledge that ethnic identity is constructed and socially fluid, our results relating to difference in fertility between Nguni and Sotho speakers add to previous work on the subject. The key finding of the paper is that these ethnic differences are amplified by differences in living

arrangements of women in different linguistic groups²⁴. In part the lower fertility of Sotho-speaking women arises because they are more urbanised than Nguni-speaking women and because more of them are of relatively high socioeconomic status. However a smaller difference persists after one allows for this among those women who do not live with relatives of the same generation. By contrast, no observable difference in fertility by linguistic group exists for women who live with kin of the same generation. This suggests again that women who choose to live with kin of the same generation are predisposed to lower fertility.

Women's schooling, household income, and region of residence also affect the lifetime fertility of black South African women. However, the impact of these factors is not mediated to any extent by marriage patterns, childlessness, or household structure. In contrast, family sizes differ by residence and language group largely because women's relationship histories and living arrangements differ according to these factors and they, in turn, affect family size.

The South African fertility decline in its socio-political context

Single-round household survey data do not allow one to analyse fertility change over time. Nevertheless, it is essential to locate the results presented here within the broader social, political and economic changes that South Africa has undergone over the last thirty years. In itself this point is not new. It has been discussed by both demographers and anthropologists²⁵. However, the strictures of apartheid and its associated patterns of social and spatial (re)organisation were so pervasive and far-reaching in their social consequences that many, if not most, determinants of fertility were affected by the imposition of apartheid policies and practices.

A definitive account of South African history since 1970 has yet to be written, and there are differing accounts from liberal and radical perspectives concerning the weight to be given to events at that time. However, albeit with different emphases, some broad agreement among historians and economists does seem to exist as to the changes that occurred in South African society from 1970 onwards²⁶.

If one accepts Posel's argument²⁷ that apartheid (even in its conceptual infancy) was never a hegemonic and uncontested ideology, the changes that occurred in South Africa from the 1970s onwards were driven as much by economic factors, as by the unravelling and fragmentation of apartheid discourses, both internally and in response to the rise in organised opposition to apartheid. Thus, while the process of political, social and economic development in the early 1970s was slow, contradictory, and characterised by repeated reversals, what both Beinart and Lipton term a "gradual erosion" of apartheid was occurring from the 1970s.

Our intention is not to engage in these debates, but to observe that the changing South African polity (with associated increased labour market opportunities for Africans, higher real wages, and shifts in government's attitude to migration and urbanisation) presented opportunities for women (especially those in urban and metropolitan areas) to free themselves from traditional patterns of marriage and patriarchy²⁸. As a consequence, women could create (or, equally, be reduced to) alternative living arrangements in urban and metropolitan areas that were not as readily possible earlier, leading to a rise in the number of female-headed households (especially in metropolitan areas, as Figure 1 indicates) and of other living arrangements that are not contingent on the presence of a husband. As women's living arrangements have become more heterogeneous, it has become important to take them into account to understand overall patterns of fertility.

In addition to the social changes outlined above, government population policy was also evolving rapidly. The early 1970s saw the introduction of the government's family planning programme and the rapid rate of uptake of the service indicates that substantial previously unmet demand for contraception existed among black African women²⁹.

The implications of these changes for women were marked and were felt most by the generation of women of childbearing age surveyed for the LSIDS study. Respondents aged 49 would have been 29 years old in 1973 while those aged 20 in 1993 would have just been born. To fully track the implications of the social changes would require equivalent data from approximately ten years prior to the LSIDS, as well as detailed qualitative research. The Human Sciences Research Council conducted a demographic and health survey in 1987-9 but these data refer to a date only four years prior to the LSIDS. The increasing speed of the South African fertility decline in the last two decades and the commencement of a process of social, political and economic change indicates the need for discussions of fertility decline in South Africa to continue to be rooted in contextual analysis. In turn, this suggests a path for further research work on the South African fertility decline: understanding the extent and magnitude of fertility change in South Africa since the 1970s will require more comprehensive investigations of the interplay between social, political and economic factors and fertility.

Conclusions

Segregationist and apartheid policies blighted the lives – and livelihoods – of generations of South African women. For decades, their personal, economic and social freedoms were drastically curtailed. The gradual demise of Apartheid emancipated black South African women from these historical and legislative constraints, *inter alia* permitting the increased participation of women in the formal labour force and allowing them to reside independently of their husbands

in urban areas. At the same time, the introduction of a national family planning programme gave women the first wide-spread opportunity to limit their fertility.

We have demonstrated that the extended African family has evolved along with other changes in South Africa over the last thirty years. While the majority of African women aged more than 35 do live in nuclear or lone-parent households, many continue to live with relatives of one sort or another. For the analysis of fertility, the most important of these relatives are those of the same generation as the woman: coresidence with such relatives is associated with having approximately 20 per cent fewer children.

The LSIDS has provided a valuable starting point for investigations of the relationship between women's living arrangements and their fertility but longitudinal or panel data is required to better understand the dynamics involved. Crucially, such investigations would aim to shed further light on the causal pathways that lie between women's living arrangements and fertility, as well as to offer possible explanations of the limiting effects of coresidence with other relatives of the same generation.

Table 1 – Mean children ever-born by age group, black South African women, LSDS 1993

<i>Age group</i>	<i>15-19</i>	<i>20-24</i>	<i>25-29</i>	<i>30-34</i>	<i>35-39</i>	<i>40-44</i>	<i>45-49</i>
Mean CEB	0.3	1.0	2.0	3.1	3.8	4.6	5.0

Table 2 – Relative numbers of children ever-born to black African women aged 20 to 49 according to their characteristics, LSDS 1993

	<i>% of women</i>	<i>Gross ratios</i>	<i>Net ratios</i>
<i>RESIDENCE</i>			
Rural	64.4	1	1
Urban	17.1	0.81	0.88
Metro	18.5	0.72	0.85
<i>LANGUAGE</i>			
Nguni	55.5	1	1
Sotho	37.8	0.81	0.94
Other	6.8	0.72	0.97
<i>MONTHLY INCOME & SCHOOLING</i>			
R0-R350	None	4.1	1
	Primary	8.6	0.90
	Secondary +	9.6	0.77
R350-R1500	None	8.0	0.90
	Primary	19.6	0.89
	Secondary +	25.1	0.67
R1500+	None	1.5	0.67
	Primary	5.0	0.80
	Secondary +	18.6	0.57
<i>PROVINCE</i>			
Cape	5.7	0.75	0.84
Natal	2.6	0.82	0.79
Transvaal	21.2	0.82	0.96
Orange Free State	6.0	0.92	0.99
KwaZulu	20.4	1	1
KaNgwane	2.6	1.01	1.00
Qwa-Qwa	0.9	0.96	0.94
Gazankulu	2.9	0.98	0.97
Lebowa	12.4	1.13	1.20
KwaNdebele	1.8	0.84	0.90
Transkei	10.4	1.17	1.15
Bophuthatswana	8.4	0.86	0.88
Venda	1.9	0.93	0.98
Ciskei	2.9	0.73	0.74

Table 3 – Percent distribution of black African women aged 15 to 49 according to their living arrangements, LSDS 1993

<i>Presence of relatives of the previous generation</i>	<i>Husband present</i>			<i>No husband present</i>		
	<i>Lives with relatives of own generation</i>	<i>No relatives of own generation in household</i>	<i>Unclassifiable</i>	<i>Lives with relatives of own generation</i>	<i>No relatives of own generation in household</i>	<i>Unclassifiable</i>
Present	3.5	3.4	0	47.3	6.4	0.1
Absent	1.3	26.5	0.1	3.1	7.5	0.9

Table 4 – Percent distribution of black African women 15-49 according to their living arrangements by age group, LSDS 1993

<i>Age group</i>	<i>Presence of relatives in the previous generation</i>	<i>Husband present</i>		<i>No husband present</i>	
		<i>Lives with relatives of own generation</i>	<i>No relatives of own generation in household</i>	<i>Lives with relatives of own generation</i>	<i>No relatives of own generation in household</i>
15-19	Present	2.0	0.5	85.2	6.6
	Absent	0.4	1.4	3.1	0.9
20-24	Present	6.2	2.6	61.6	7.1
	Absent	0.6	17.1	2.8	2.0
25-29	Present	5.5	4.8	46.7	6.7
	Absent	1.5	26.3	3.2	5.3
30-34	Present	3.4	6.0	31.3	5.7
	Absent	2.5	39.9	2.9	8.3
35-39	Present	2.2	4.8	19.4	7.3
	Absent	2.9	47.8	3.0	12.6
40-44	Present	0.9	4.2	12.2	5.1
	Absent	1.9	50.1	4.2	21.5
45-49	Present	0.9	4.0	6.1	5.6
	Absent	0.7	53.9	3.4	25.5

Table 5 – Percent distribution of black African women according to their relationship to the household head by age group, LSDS 1993

<i>Relationship to household head</i>	<i>15-19</i>	<i>20-24</i>	<i>25-29</i>	<i>30-34</i>	<i>35-39</i>	<i>40-44</i>	<i>45-49</i>
Head/Wife of absent head	0.4	2.3	7.6	11.0	15.8	26.4	28.9
Wife	1.7	18.7	30.4	46.2	52.9	53.8	57.5
Daughter	70.2	54.4	44.4	29.9	19.8	13.6	7.7
Daughter-in-law	1.9	6.9	6.7	5.0	3.8	1.5	0.8
Aunt, mother(-in-law), grandmother	0.1	0.0	0.1	0.3	0.5	0.2	1.4
Sister, sister-in-law, cousin	4.2	6.5	5.5	4.8	5.7	3.2	3.0
Niece	4.6	3.1	0.9	0.9	0.3	0.5	0.0
Grandchild	15.7	6.3	3.1	1.2	0.5	0.1	0.2
Other family	0.9	0.9	0.9	0.5	0.5	0.4	0.3
Other non-family	0.3	0.9	0.4	0.3	0.3	0.4	0.2

Table 6 – Percentage of black African women who are childless by age group and living arrangements, LSDS 1993

<i>Age group</i>	<i>Presence of relatives of the previous generation</i>	<i>Husband present</i>		<i>No husband present</i>	
		<i>Lives with relatives of own generation</i>	<i>No relatives of own generation in household</i>	<i>Lives with relatives of own generation</i>	<i>No relatives of own generation in household</i>
15-19	Present	37	15	80	81
	Absent	15	34	78	73
20-29	Present	14	13	34	24
	Absent	10	7	36	20
30-39	Present	7	7	11	9
	Absent	8	3	12	7
40-49	Present	10	6	17	4
	Absent	8	2	11	3

Table 7 – Odds of living with various relatives by age for childless black African women compared with mothers, LSDS 1993

<i>Lives with:</i>	<i>Age</i>			
	<i>15-19</i>	<i>20-29</i>	<i>30-39</i>	<i>40-49</i>
Parent(s)	1.395*	2.334	2.329	3.670
Other kin in the previous generation	1.445*	1.815	1.886**	6.673
Relatives of the same generation	2.155	4.065	2.507	6.025
Husband	0.117	0.186	0.393	0.322

Note: All odds significant at $P < 0.001$ except those superscripted * $P < 0.05$ and ** $P > 0.1$

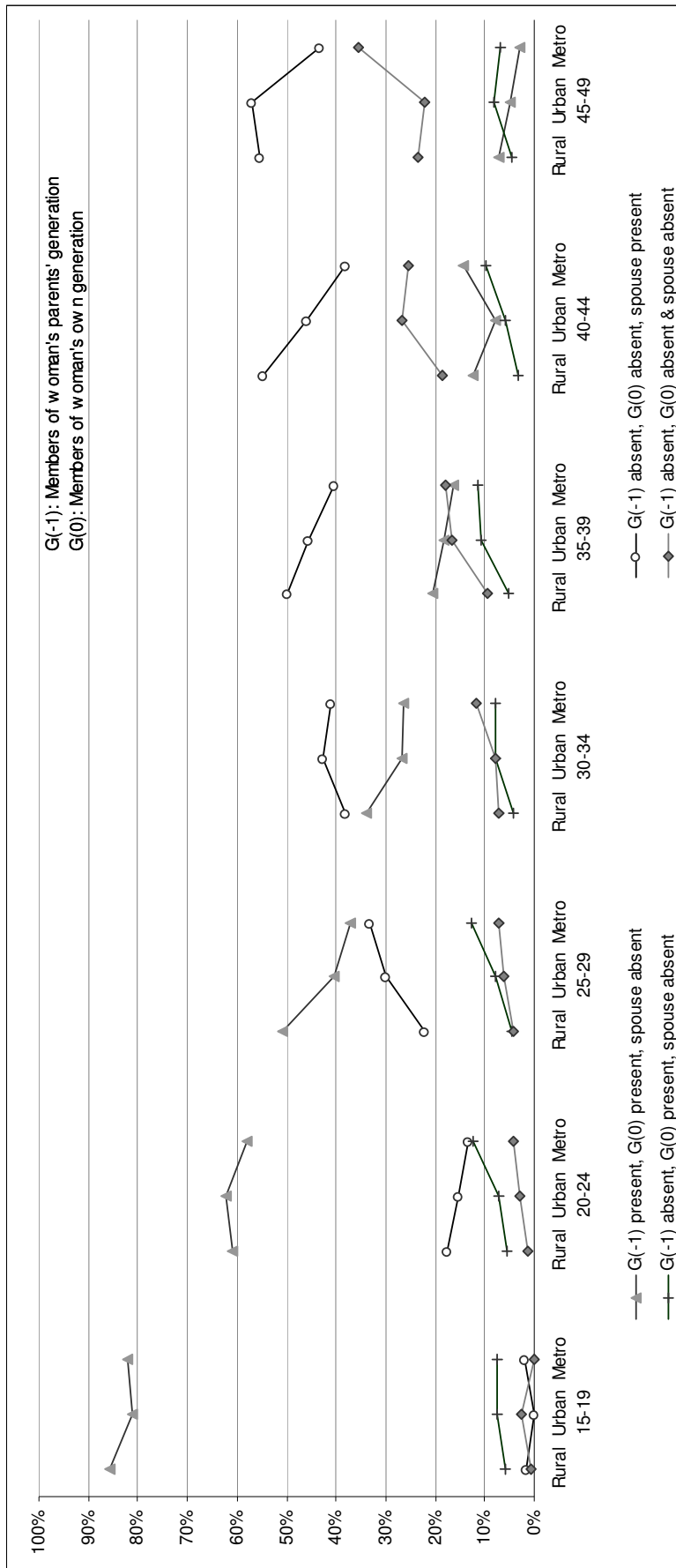
Table 8 – Relative numbers of children ever-born to black African mothers aged 20 to 49 according to their living arrangements and other characteristics, LSDS 1993

		<i>Social & economic characteristics</i>	<i>Presence of husband & other characteristics</i>	<i>Household & other characteristics</i>	
				<i>No kin of same generation</i>	<i>Lives with same generation kin</i>
<i>HUSBAND IN HOUSEHOLD</i>					
	Present	--	1	1	0.85
	None or absent	--	0.78	0.87	0.65
<i>RESIDENCE</i>					
	Rural	1	1	1	0.78
	Urban	0.94	0.96	0.93	0.78
	Metro	0.90	0.94	0.87	0.81
<i>LANGUAGE</i>					
	Nguni	1	1	1	0.78
	Sotho	0.95	0.93	0.91	0.77
	Other	1.00	0.97	0.93	0.86
<i>MONTHLY INCOME & SCHOOLING</i>					
R0-R350	None	1	1	1	
	Primary	0.91	0.93	0.92	
	Secondary +	0.72	0.71	0.71	
R350-R1500	None	1.00	1.00	1.02	
	Primary	0.92	0.93	0.95	
	Secondary +	0.77	0.80	0.82	
R1500+	None	0.82	0.82	0.82	
	Primary	0.84	0.87	0.91	
	Secondary +	0.70	0.72	0.83	
<i>PROVINCE</i>					
	Cape	0.86	0.85	0.83	
	Natal	0.93	0.93	0.89	
	Transvaal	0.95	0.91	0.89	
	Orange Free State	0.98	0.95	0.93	
	KwaZulu	1	1	1	
	KaNgwane	0.95	0.92	0.89	
	Qwa-Qwa	0.95	0.94	0.91	
	Gazankulu	0.98	0.99	0.95	
	Lebowa	1.06	1.05	1.01	
	KwaNdebele	0.83	0.86	0.86	
	Transkei	1.17	1.15	1.13	
	Bophuthatswana	0.88	0.89	0.86	
	Venda	0.92	0.91	0.86	
	Ciskei	0.82	0.82	0.79	

Table 9 – Percentage of black African mothers migrating and moving between rural, urban and metropolitan zones in the previous five years by age group, LSDS 1993

	<i>15-19</i>	<i>20-24</i>	<i>25-29</i>	<i>30-34</i>	<i>35-39</i>	<i>40-44</i>	<i>45-49</i>
Migrated	4.0	6.7	6.9	7.2	4.1	3.0	4.2
Changed residential zone	2.7	3.3	4.0	3.8	2.6	1.6	2.3

Figure 1 - Distribution of major living arrangements of black African women 15-49 by age group and residence, LSDS 1993



Footnotes

¹ E. Udjo, *The People of South Africa - Population Census 1996: Additional Evidence Regarding Fertility and Mortality Trends in South Africa and Implications for Population Projections*, (Pretoria, Statistics South Africa: Directorate of Analysis 1998).

² J.C. Caldwell and P. Caldwell, 'The South African fertility decline', *Population and Development Review* 19, 2 (1993), pp. 225-262. W. P. Mostert, 'Recent trends in fertility in South Africa' in W. P. Mostert and J. M. Lötter (eds.) *South Africa's Demographic Future*. (Pretoria, Human Sciences Research Council 1990), pp. 63-73.

³ C.E. Kaufman, 'Contraceptive use in South Africa under apartheid', *Demography*, 34, 4 (1998), pp. 421-434.

⁴ For a comprehensive bibliography see J.A. van Zyl, 'History, scope and methodology of fertility and family planning surveys in South Africa', Paper presented at the Annual Meeting of the Population Association of America, Miami, Florida, May 5-7, 1994.

⁵ O. Chimere-Dan, 'Population policy in South Africa', *Studies in Family Planning*, 24, 1 (1993), pp. 31-39. E. Preston-Whyte, 'Qualitative studies of fertility and family planning in South Africa', Paper presented at the Annual Meeting of the Population Association of America, Miami, Florida, May 5-7, 1994.

⁶ Caldwell and Caldwell 'The South African fertility decline'. J.S. Oosthuizen, 'Recent fertility trends in South Africa as reflected by fertility surveys', Paper presented at the Annual Meeting of the Population Association of America, Miami, Florida, May 5-7, 1994.

⁷ SALDRU, *South Africa Integrated Household Survey 1993* (Cape Town, South Africa Labour and Development Research Unit: University of Cape Town 1994).

⁸ T.A. Moultrie and I.M. Timæus, *Trends in South African fertility between 1970 and 1998: An analysis of the 1996 Census and the 1998 Demographic and Health Survey* (Cape Town, Medical Research Council forthcoming).

⁹ To obtain the results in Table 2, we first calculated the average number of children ever-born to women by single years of age and divided the actual number of children ever-born to each woman by the mean for their age. For example, African women aged 35 in the LSDS had 3.75 children on average. Dividing actual births by 3.75 for each woman aged 35 produces an index of her fertility relative to other women of her own age. Doing this for all ages produces an individual-level index of lifetime fertility that is independent of age since the mean of the ratios is 1 at all ages. Women aged 15 and 19 are excluded from the analysis as they tend not to have borne children. Moreover, those that have done so almost all live at home with their parents, without a partner.

¹⁰ The net effects were estimated by multiple regression. As the age-standardised ratios can only take values in the interval $[0, \infty)$, the model was fitted using tobit regression.

¹¹ Note that, according to LSDS definitions, metropolitan areas include not only Johannesburg, Cape Town and Durban but smaller cities throughout South Africa. Thus, by urban residents we mean women living in "small" towns.

¹² For example, the gross effect of rural residence does not make allowance for the fact that women in more rural areas are more likely to be poor and poorly educated than metropolitan residents. The "net effect" column does. Family sizes in metropolitan areas are 28% (100%-72%)

smaller than in rural areas but the net effect of metropolitan residence once other factors have been controlled for is only 15% (100%-85%).

¹³ South Africa, Science Committee of the President's Council, *Demographic Trends in South Africa*. (Cape Town, The Government Printer, 1983).

¹⁴ See for example, T. Locoh, 'Demographic aspects of the family life cycle in sub-Saharan Africa', in Federal Institute for Population Research (ed). *Health and the Family Life Cycle: Selected Studies on the Interaction Between Mortality, the Family and its Life Cycle* (Wiesbaden, Federal Institute for Population Research 1982), pp. 159-196. T. Locoh, 'The evolution of the family in Africa', in E. van de Walle, P.O. Ohadike and M.D. Sala-Diakanda (eds). *The State of African Demography* (Liège, Derouaux 1988), pp. 47-65. N. Folbre, *Who Pays for the Kids? Gender and Structures of Constraint* (London, Routledge 1994). C.B. Lloyd and A.K. Blanc, 'Children's schooling in sub-Saharan Africa: The role of fathers, mothers, and others', *Population and Development Review* 22, 2 (1996), pp. 265-298.

¹⁵ A. Spiegel, V. Watson and P. Wilkinson, 'Domestic diversity and fluidity among some African households in Greater Cape Town', *Social Dynamics* 22, 1 (1996), pp. 7-30. S.H. Chant, 'Households, gender and rural-urban migration: Reflections on linkages and considerations for policy', *Environment and Urbanization* 10, 1 (1998), pp. 5-21.

¹⁶ D. Budlender, *The Debate Over Household Headship*, (Statistics South Africa, Pretoria c. 1998). <http://www.statssa.gov.za/debating/r-hhh-01.doc>, accessed: 4 May 1999

¹⁷ V. van der Vliet, 'Traditional husbands, modern wives - constructing marriages in a South African township', *African Studies* 50, 1-2 (1991), pp. 219-241.

¹⁸ S.W. Muthwa, 'Economic survival strategies of female-headed households: the case of Soweto, South Africa', Unpublished PhD dissertation (School of Oriental and African Studies, University of London, London 1995).

¹⁹ Numerous coding errors were identified during the construction of the relationship variable necessitating further manual cleaning of the data files distributed from the World Bank web site. In addition, race was recorded only recorded for respondents not other household members, which prevents one from identifying mixed-race households or the race of domestic servants. Thus, 97 of the 127 female servants of reproductive age in the sample live in 'white' households. While we expect that most of these women are black Africans, we have excluded all servants from the analysis. As the majority (107, 84.3 per cent) of servants are recorded as living without their parents and with no husband present, to include them would raise the proportion of women unclassifiable but with their spouse and parents absent from 0.9 to 2.0 per cent.

²⁰ D. Budlender, *The Debate Over Household Headship*.

²¹ D.I. Kertzer, 'Household and gender in a life-course perspective', in E. Masini and S. Stratigos (eds). *Women, Households and Change* (Tokyo, United Nations University Press 1991), pp. 18-29.

²² E. Preston-Whyte, 'Families without marriage: A Zulu case-study', in J. Argyle and E. Preston-Whyte (eds). *Social System and Tradition in Southern Africa* (Cape Town, 1978), pp. 55-85. B. Fuller and X. Liang, 'Which girls stay in school? The influence of family economy, social demands and ethnicity in South Africa', in C.H. Bledsoe, J.B. Casterline, J.A. Johnson-Kuhn and J.G. Haaga (eds). *Critical Perspectives on Schooling and Fertility in the Developing World* (Washington DC, National Academy Press 1999), pp. 181-215. B.A. Pauw, *The Second Generation: A Study of the Family Among Urbanized Bantu in East London* (Cape Town, Oxford University Press 1963). H. Kuckertz, *Creating Order: The Image of the Homestead in Mpondo Traditional Life* (Johannesburg, Witwatersrand University Press 1990).

²³ The net effect of residence, before allowing for women's residential arrangements (Table 2), is that women in metropolitan areas have about 10 per cent fewer children than women in rural areas. Amongst mothers the differential is only 10 per cent (first column of Table 8) and once the presence of a husband is allowed for (second column of Table 8) it narrows to 6 per cent, reflecting the fact that women in metropolitan areas are less likely to be married than rural residents. However, residence has almost no net effect on the fertility of those mothers who live with kin of the same generation (final column of Table 8). Their family sizes are 19 to 22 per cent smaller than those of rural mothers who do not live with such kin. Lifetime fertility only varies with residence for mothers who do not live with kin of the same generation, the reduction becoming increasingly pronounced as one moves from rural to metropolitan areas.

²⁴ D. James and C. Kaufman, 'The Reproductive Consequences of Shifting Ethnic Identity in South Africa: Linking Numerical and Interpretive Data', Paper presented at the Annual Meeting of the Population Association of America, Washington D.C., 27-29 March 1997. South Africa, Science Committee of the President's Council, *Demographic Trends in South Africa*, (Cape Town, The Government Printer, 1983).

²⁵ J.C. Caldwell and P. Caldwell, 'The South African fertility decline'. C.E. Kaufman, 'Reproductive control in South Africa', *Population Studies* 54, 1 (2000), pp. 105-114. E. Preston-Whyte, 'Culture, context and behaviour: Anthropological perspectives on fertility in Southern Africa', *Southern African Journal of Demography* 2, 1 (1988), pp. 13-23.

²⁶ See, for example, W. Beinart, *Twentieth-century South Africa* (Oxford, Oxford University Press 1994). M. Lipton, *Capitalism and Apartheid: South Africa, 1910-1986* (Aldershot, Wildwood House 1985).

²⁷ D. Posel, 'The meaning of apartheid before 1948: Conflicting interests and forces within the Afrikaner Nationalist alliance', in W. Beinart and S. Dubow (eds). *Segregation and Apartheid in Twentieth-century South Africa* (London, Routledge 1995).

²⁸ This is a point covered well in Bozzoli's study of women in Phokeng. B. Bozzoli, *Women of Phokeng: Consciousness, Life Strategy, and Migrancy in South Africa, 1900-1983* (London, James Currey 1991).

²⁹ The average number of women protected per month in South Africa increased from around 437 000 to 905 000 between 1974 and 1976 (C.E. Kaufman, *Reproductive Control in South Africa*, Policy Research Division Working Paper No. 97 (Population Council, New York 1997), p.4. , B. Brown, 'Facing the 'black peril': The politics of population control in South Africa', *Journal of Southern African Studies* 13, 3 (1987), pp.256-273).