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Social Positioning of Older Persons in Rural South Africa: Change or Stability?

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Abstract

The South African context challenges the conventional categorisation of older persons as dependent after a certain age. The concurrence of old-age pensions, high unemployment, high HIV prevalence, and frailty related to ageing necessitate a more dynamic approach to understanding older persons' social positioning. We examine the extent of change in older persons' social positioning within their households and the correlates of change in a rural community in South Africa. Using data from the Agincourt Health and socio-Demographic Surveillance System and a new typology of older persons' social positioning based on living arrangements, we (1) describe older persons' living arrangements in two time periods; (2) calculate transition probabilities of older persons' changing living arrangements over time; (3) identify possible drivers of change. Results show that while older persons experience stability in living arrangements over time, this stability is more prevalent among those who start in productive roles. Moreover, those who change arrangements are likely to move into productive roles. Taken together, these findings suggest that older South Africans fulfil productive roles in households while simultaneously experiencing ageing-related frailty and diminished labour capacity. These findings underscore the importance of considering ageing as both an individual and a relational process, with implications for older persons and their families.

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Keywords

South Africa; living arrangements; social positioning; ageing; household; transitions

Introduction

How does the social positioning of older persons – as dependent or productive members of households – change as they age in rural South Africa? Most extant research on ageing uses a limited and static conceptualisation of older persons as 'dependent' because of their withdrawal from the labour force and increasing physical frailty. For example, the standard dependency ratio used by demographers relies on discrete age groupings to reflect productive and dependent proportions.[1] Economists and others tend to emphasise income generation and economic productivity as the critical criteria to determine productivity; access to pensions and other sources of support are viewed as indicators of dependency.[2] Increasing life expectancy globally has, of course, necessitated a rethinking of what 'old' means and has blurred the lines between productive and dependent groups. The convention, however, particularly in lower- and middle-income countries, continues to situate older persons, often beginning at the age of 60, in a dependent status, from which there is no return.

This analysis builds on earlier work in which we developed a typology of older persons' social positioning based on living arrangements using data from the Agincourt Health and socio-Demographic Surveillance System (AHDSS) in rural north-eastern South Africa. Described in depth in an earlier paper,[3] this typology differs from existing ones because it attempts to put into practice a multidimensional and interdependent conceptualisation of being productive and dependent at older ages by incorporating not just economic status but also caregiving and domestic duties as markers of productivity. Dependency, on the other hand, reflects a state of being taken care of by others in conditions that are socially and economically stable. In this article, we apply this typology to (1) describe the extent of change in the living arrangements of older persons in two time periods (2000–2005, 2005–10); (2) calculate transition probabilities of older persons moving from one living arrangement to another between periods; (3) identify possible drivers of such transitions. The focus of this analysis, therefore, is dynamism of social positioning. Our choice of time periods is driven by two important shifts that occurred—a change in the HIV-related mortality profile around 2005, and the lowering of men's pension eligibility age to 60, from 65, to attain parity with women, which occurred in 2008. The 2000–2005 period was marked by rapidly increasing HIV-related mortality, which peaked in 2007 before starting to decrease in 2008, partly attributable to the roll-out of anti-retroviral therapy (ART).[4] The South African context offers a unique convergence of factors – access to a state-funded old-age pension, high unemployment, high HIV prevalence and AIDS mortality, and increasing life expectancy at birth. Further, the increasing prevalence of non-communicable diseases and ageing with HIV means that the burden of disease among older persons is not insignificant.[5] Therefore, it serves as an ideal case study to challenge conventional understandings of 'dependency' and 'productivity' as distinctive life stages, because older

persons are obliged to fulfil productive roles while, at the same time, experiencing their own age-related frailty and diminished labour capacity.

The importance of this study can be appreciated in a number of ways. First, given the implications for well-being of older persons, it is critical that we improve our understanding of how, as people age, they move between dependent and productive roles. Second, by including care-giving as an important aspect of productive activities, we hope to contribute a needed corrective to the underestimation of women's labour. Third, while many studies have established the role of pensions in providing financial security to poor South African households,[6] we know very little about how the relative value of this social grant as a productive dimension of older persons changes over time as pensioners age. Fourth, population growth among individuals aged 65 and older is projected to be fastest in Africa, compared to other world regions. Therefore, understanding the ageing process in Africa is of paramount importance. Finally, even though the South African context is unique in many ways, this study can guide a similar analysis in other contexts undergoing rapid demographic and socio-economic change.

Getting Old in South Africa

The proportion of persons aged 65 and older in South Africa is projected to double between 2010 and 2050, from 5.2 to 10.5 per cent.[7] Because there are very few institutional options for older persons' care in South Africa, particularly in the African population, most people continue to live with and be cared for by family members into their old age until their death. The majority, particularly older women, prefer to live with adult children and/or grandchildren,[8] but are not necessarily a financial burden to their families. This is, in large part, because of the old-age pension system, which has been in place since the late 1920s, though Africans had equal access only from around 1994.[9] Until 2008, men were eligible to receive the pension only at 65, while women could do so at 60, but it has since been equalised, so that both men and women receive it starting at the age of 60. Most age-eligible Africans received the monthly pension of R1,080 (c.US$109) in 2010, with 90 per cent coverage nationally and about 80 per cent in the site of the present study.[10]

Unlike in many high-income countries, pensions in southern Africa are non-contributory, because the majority of older Africans have never engaged in formal employment, let alone had benefits. Therefore the cash transfer is essentially an anti-poverty measure, assisting older persons, the unemployed, single parents, migrants, and children.[11] Furthermore, because middle-income African settings, like South Africa, have schools, health facilities, and other amenities, pensions enable poor households to access these resources.[12] With pension receipt, older South Africans' reported that health and quality of life improve, as does the food security and well-being of other household members.[13] For all these reasons, access to the pension makes older persons not only attractive but, often, indispensable members of the households in which they live.

Two additional factors that affect older South Africans are the high unemployment rate, and the trajectory of the HIV epidemic. Unemployment rates in South Africa are reported to be as high as 25 or 40 per cent (depending on whether a 'narrow' or a 'broad' definition is

used) among the African population,[14] underscoring the critical role of the pension. Some studies suggest that the old-age pension actually contributes to the high unemployment rate by supporting younger potential workers and thus keeping them out of the labour market.[15] Secondly, the high prevalence of HIV and delayed roll-out of anti-retroviral therapy (ART), have been critical factors in defining older persons' roles and responsibility within households.[16] Older persons, particularly grandmothers, have taken on care-work responsibilities related to sick HIV-positive adult children and fostered and orphaned grandchildren.[17] While other high-prevalence countries, such as Uganda and Botswana, responded quickly by providing near universal access to ART by 2005, South Africa reached only 21 per cent of those in need by that time.[18] In the years following ART roll-out, older persons' roles and responsibilities probably changed again because of increasing life expectancy, more chronic management of the disease, fewer orphans, and a greater likelihood of older persons themselves being HIV-positive, as individuals' age with the disease.

Taken together, these factors make it difficult, if not impossible, for older persons to follow an ideal, albeit romanticised, ageing process, which might include: being taken care of by employed adult children; being able to use their pensions for their own needs and/or decide how to use their income; being part of a large social support network that provides friendship and practical and emotional support. In this sense, 'dependency', as described by older persons themselves, is less about vulnerability and more about being taken care of properly, as is their due. Indeed, previous research at the study site[19] has shown the heterogeneity of ageing experiences explained in part by access to social support. Moreover, being dependent on a social support network is far preferable to social isolation, even if the former entails limited financial commitments. However, the reality of the South African context, as described above, presents a number of obstacles to attaining the ideal ageing scenario by obliging older persons to take on productive roles for themselves and their families. Some work suggests that this may afford older persons more bargaining power within households, particularly if there are notable improvements in health, schooling and well-being of household members.[20]

Conceptual Background

Older persons' social positioning is inextricably tied to the extent of their 'dependency'. Who and why someone is considered 'dependent' is a contentious issue. Age-based criteria, conventionally applied by demographers, include a combination of the reproductive life span (for women), labour-force participation and physical abilities.[21] Economists tend to focus on economic contribution as the key marker of individual productivity. Some scholars have problematised the very conceptualisation of 'dependence'. Robertson[22] highlights the competing demands that are placed on older adults in western contexts to be socially independent, yet deem them economically dependent. To address this conundrum, she has called for a moral economy of interdependence, based on the notion of reciprocity, which would transcend the dependence/independence dichotomy. Fine and Glendinning[23] take issue with the rigid distinctions between care-giving and dependency and suggest that we consider the range of meanings inherent in each that 'create opportunities for the active development of practices of human recognition in response to life course imperatives'. More

recently, Ferguson[24] has argued that there is a need to expand our understanding of the 'politics of distribution' beyond a narrow focus on wage labour to one that includes more distributive forms of livelihood, such as those grounded in kin-based interdependencies. We follow this line of scholarship by defining productivity as a multidimensional, interdependent concept made up of economic contribution, care-giving (practical and emotional) and labour contribution. Dependence, on the other hand, is not the opposite, but rather a state of being taken care of by others.

The temporal nature of social positioning is a critical component that is not given due attention. Most studies in demography and economics characterise the social status of older persons as a static attribute. For example, the transition out of the labour force is usually seen as permanent, from which there is no re-entry back into productive roles.[25] Similarly, the transition out of the reproductive life-span is usually viewed as a one-way process out of a productive state. While, biologically, this makes sense, social norms are more likely to dictate women's 'productive state'. For example, the 'grandmother rule' states that women should cease their own childbearing once their daughters start theirs, even if they have not reached the end of the reproductive span.[26] Moreover, this transition, in many situations, necessitates that the grandmother remains highly productive in terms of care-giving. Efforts at modelling transitions in living arrangements of older adults, while illustrative of the rate and magnitude of change in co-residence patterns,[27] say very little about changes in social positioning.

Our attempt to address the temporality of social positioning is grounded in life course theory. For the analysis at hand, we draw on two key principles of the life course approach: [28] 'historical time and place', which states that the life course of individuals is embedded in and shaped by the historical time and places they experience over the life course; and 'linked lives', which posits that lives are lived interdependently, and social and historical influences are expressed through this network of shared relationships. As explained earlier, South Africa makes for a particularly interesting context because it is in the midst of a profound social transition. Moreover, the policy shifts in pension allocation and change in HIV mortality patterns within this historical period enable us the better to understand the effect of specific period events on the lived experience of older persons. The concept of linked lives is important because social positioning is at least as much a product of one's relationships as it is about individual attributes. Nowhere is this more explicitly shown than in the household. A long history of scholarship on household structure and dynamism has established that the configuration of household membership is continually shifting in response to the needs and capacity of each of its members.[29] Change in older persons' social positioning in their households is a reflection of the changing needs of the household as children are born and individuals are ill, die or move out, or members lose or gain employment. Of course, their roles are also mediated by their own ageing, which at some point will render them physically incapable of serving in any productive capacity, and will divert pension funds towards their care. While older persons' productive capacity through their access to pensions is indeed welcomed in most South African households, we know very little about how competing demands brought on by old-age frailty complicate these roles.

It has long been shown that life course processes and life stage obligations vary by gender.[30] To begin with, higher female life expectancy results in a greater number of elderly women than of men.[31] Second, labour market needs also play an important role in determining the duration of formal employment.[32] Third, men and women occupy different roles within their families and kin groups.[33]

Using this conceptualisation, we test the following hypotheses:

1. older persons are more likely to experience change rather than stability in their social positioning within households over time, given the complexities and multiple demands of the households in which they live;
2. older persons are more likely to move into productive roles rather than into dependent roles because of their access to pensions, unfavourable employment conditions and high HIV prevalence;
3. these transitions are influenced by sex and age cohort of the individual and vary across time periods, given the links between social change and responses at the household level.

Site Description, Data and Methods

The Agincourt sub-district is located in Limpopo province, the second poorest province in South Africa. The residents of the field site face a number of challenges, including sub-standard education and limited labour market opportunities. This semi-rural area, inhabited almost entirely by an African population, had high rates of refugee influx from neighbouring Mozambique during that country's civil war and continues to attract labour migration from there. Sharing a common language – Shangaan – and common ancestral linkages facilitates integration. It is important to note, however, that, historically, Mozambicans had even more limited access to resources than the local African population. Employment opportunities in the area are mostly found in teaching, nursing, small business enterprises and tourism generated from the Kruger National Park. Traditionally a labour-exporting area to the mines of the Rand, the areas has been affected by retrenchments in the mines, leaving a large proportion of productive-age men unemployed. Indeed, it is not uncommon to hear older men comparing the present-day challenges that young men face with a more stable employment context in the past. However, there has been a notable increase in female migration[34] to small towns within commuting distance of Agincourt villages or to game parks in the area. This allows them to leave their children behind in the care of other family members[35] in return for a steady household income. Other work set in this area has documented household livelihood strategies, including the movement of children,[36] the under-appreciated role of fathers,[37] and linkages to urban households.[38] In short, while labour migration to urban areas and smaller towns continues to be an important means of securing a livelihood for families in Agincourt, it is often insufficient to meet the needs of household members. HIV/AIDS renders the situation more complex. From 1992 into the 2000s, Agincourt experienced a dramatic increase in HIV prevalence and AIDS-related mortality, followed by increased voluntary testing and counselling services, and, since 2008, roll-out of ART.[39]

Taken together, the challenges of securing employment and caring for HIV-infected members as well as for orphans necessitates the extension of older persons' productive life span. Specifically, their financial contributions from their pensions along with domestic/child-care labour makes older persons indispensable to Agincourt households. Case and Deaton,[40] in their analysis of national data, showed that pensions constitute a large portion of total household income. Moreover, Duflo[41] found that pensions received by women are, in turn, beneficial to girls' nutritional status, suggesting that pension income is directed towards food and health care. Research conducted in Agincourt specifically shows that adults and children living in households with a pension recipient are less likely to skip meals and that girls are more likely to go to school.[42] Qualitative research from Agincourt has shown that older women use their pension to sustain and maintain their households – they buy food and electricity, increase access to water and firewood, pay school fees.[43] Furthermore, it is clear from more recent quantitative analyses that those age-eligible for the pension but not accessing it tend to have poorer socio-economic status and live in smaller households then pensioners.[44]

In this analysis, we use data from the AHDSS.[45] Beginning in 1992, when the baseline census was conducted in 21 villages (3 villages were added in the 2007 update), there has been an annual updating of all vital events – births, deaths and in- and out-migrations. Temporary migrants are designated as *de jure* household members, even if physically absent for up to six months in the year preceding the interview. Household rosters include age and 'relationship to household head' for each member. Following work by the World Health Organisation, we define an older person as an individual 50 or more years old.[46] This age cut-off also allows us to examine differences among older persons before and after pension eligibility, which occurs at 60. In this analysis, we include all individuals aged 50+ resident in the field site in 2000, giving us a starting population of 7,518 individuals (10.6 per cent of the total population in 2000). We construct a longitudinal data file that links each individual to their respective living arrangements in 2000, 2005 and 2010. We apply a typology of living arrangements, developed in an earlier analysis, that categorises the positioning of older persons within households according to their likelihood of being more dependent or more productive.[47] Arrangements in which older persons are more likely to be productive include 'single generation', in which there is no one else to take care of them, and 'complex linked', which is a multi-generational household usually made up of unmarried children, who are also often unemployed, with their children. The arrangements in which they are more likely to assume a dependent role are 'linear linked', a multi-generational household, in which older persons are taken care of by married, employed children and grandchildren, and 'two generation', where older persons are living with married and/or employed children, who are able to take care of them. The 'other' category is a catch-all for all arrangements that are too small in number but not appropriate to include in the other categories, and therefore cannot be classified as either dependent or productive. Analyses with and without the 'other' group produced similar results, suggesting that the 'other' households are randomly distributed over dependent and productive classifications. In order to retain a larger sample, we choose to retain this category in the analysis.

Our analysis follows in these steps. First, we examine the extent of change and stability in living arrangements that these individuals experience in each of two periods: 2000–2005 and

2005–10. In order to account for those who die or move out of the field site in the time period, we include a ‘censored’ category as an outcome. Moving within the field site is not an issue, given that the person carries the same ID to the next household. Second, we calculate transition probabilities for different types of change in each period for those who change. Lastly, we use standard regression models to analyse the influence of sex and age group at the start of the period on the likelihood of change in each period. Again, to account for mortality, the model includes ‘censored’ as a third type of outcome, along with ‘no change’ and ‘change’. Age at beginning of the period is categorised as follows: 50–54 (pre-pension) going to 55–59 (pre-pension); 55–59 (pre-pension) going to 60–64 (early pension); 60–64 (early pension) going to 65+ (older pension); 65+ (older pension) going to oldest ages with pension. This categorisation allows us to consider the competing effects of increasing physical frailty evident at older ages with the added value of pension access. Sex of older person enables us to test whether gendered life course patterns are evident in transitions. Control variables include household socio-economic status, based on wealth rankings and operationalised as quintiles (1 for poorest and 5 for wealthiest). Nativity status (South African- or Mozambican-born), and living arrangement at the start of the period are also included. Gender-stratified models yielded few substantive differences; therefore we show gendered pooled results. We cluster on household to adjust for correlated standard errors from having more than one older persons per household.

Results

We start with basic descriptive characteristics of the AHDSS population of older persons in 2000 in Table 1. The proportion of women at the oldest ages is substantially greater than the proportion of men (45 per cent as against 34 per cent), reflecting higher female life expectancy. Women are also found in greater proportions in poorer households compared to men. While not shown, there has been an increase in the prevalence of chronic diseases, such as hypertension and cardiovascular conditions, in the Agincourt area, particularly for those over the age of 50. Historically, this presents an unprecedented situation, with the concurrence of both ‘diseases of the ageing’ and infectious diseases (HIV) creating an enormous burden on the primary health care system. The proportion of the study population who are Mozambican-born is quite high, reflecting the close linkages between the Agincourt area and neighbouring Mozambique, particularly during the period of conflict in Mozambique, when many of these people would have moved to the Agincourt area.

Table 2 presents the distribution of older persons who experienced no change, change in their social positioning, or censoring through mortality or out-migration in each time period. We disaggregate by sex, age group and living arrangement at the start of the period to highlight the extent of variation in these factors. Older persons experience stability in their social positioning, at least over these 5-year periods, across age group, sex and initial living arrangement. Moreover, these patterns are similar in both time periods, suggesting that changes in HIV mortality, access to treatment and the lowering of men’s pension eligibility age need are not reflected in these features. Men are, however, proportionally more likely to be censored out than women, most probably due to mortality. There is a small decrease in the proportion who experience change among the older age groups. Not surprisingly, these groups are also more likely to be censored because of death. Older persons living in single

generation or complex linked arrangements, both structures in which the older person is likely to be playing a productive role, are most likely to remain stable in both periods. Moreover, we find that two-generation and linear linked arrangements, structures in which older persons are more likely to be playing a dependent role, are more likely to change in both periods. Finally, we find that those living in single generation and 'other' arrangements are most likely to be censored due to mortality. While going against our initial hypothesis that we are likely to see more change than stability, this is similar to what Nyirenda *et al.* found in their analysis of older persons' living arrangements in KwaZulu Natal.[48] However, the stability appears to be of a particular kind – productive positioning. Moreover, those who are in dependent roles are likely not to remain there over a 5-year period. To understand these dynamics better, we examine transition probabilities of moving from one type to another, as shown in Table 3, which is restricted to those older persons who change living arrangements in each period.

Because we are using the total number of individuals who changed living arrangements in the period as the denominator, the percentages in all the cells are small. Nevertheless, some transitions merit consideration. In both periods, the highest probabilities (6–8 per cent) are evident for transitions between categories 2, 3 and 5 (all dependent) to category 4 (productive) and the percentages are notably higher in the 2005–10 period – 11–15 per cent. This could be reflective of the high HIV-related mortality rates experienced in at least the first half of Period 2, which increase the care-giving demands on older persons. Alternatively, it may reflect the effect of the ART roll-out that began towards the end of the period, which would translate into people living with HIV who themselves are in a dependent position because of diminished labour capacity. In both time periods, however, 8 per cent and 15 per cent of older persons, respectively, move from category 4 to category 3, in which they are more likely to be dependent. These older persons are likely to be the oldest of the old, for whom old-age frailty necessitates movement into a dependent category. In other words, their productive value derived from pension access and decision-making power may be superseded or muted by their increasing physical challenges, which require others to take care of them. Because our focus is on older persons, these tables do not tell us anything about the concurrent changes taking place with other household members who are also ageing and therefore changing their own social positioning. One crucial aspect of those transitions is circular labour migration, through which members contribute to household economic resources. This, in turn, would relieve the economic burden from older persons but possibly increase care-giving needs of young children left behind by working parents. While modelling of all these transitions is beyond the scope of this article, the extensive literature on South African labour migration patterns underscores the importance of this issue. Taken together, however, these transition probabilities provide qualified support for our second hypothesis: that those who experience a change are more likely to move into productive roles. In order to understand better the drivers of change, we move to regression results (see Table 4) to address hypothesis three: that sex and age group influence the likelihood of experiencing change net of individual and household attributes and that these processes vary across time.

There is no significant sex difference in the likelihood of experiencing change in either period, but it is interesting to note that the direction of effects changes. Whereas women

were more likely than men to experience change in Period 1, they are less likely to do so in Period 2. This could be partly attributed to the lowering of men's pension eligibility age, which occurred in Period 2; this means that there were larger numbers of men with resources who might be attractive household members. Being female decreases the likelihood of being censored compared to males in both periods, attributable to higher male mortality. The lack of significant effects of age group in both periods goes against our expectation that particular age groups would be more likely to change because of actual or anticipatory effects of pension receipt. However, this non-effect does suggest that other factors – for example, strength of relationships – may play a bigger role than pension receipt in influencing social positioning of older persons. Moreover, the subtle differences across time period invite some careful reflection. In the 2000–2005 period, those in the 55–59 age group are less likely to change compared to those in the youngest group (early pre-pension), possibly because they acquire pension eligibility status in the period, which might provide more incentive for households to retain the older person as a household member. The fact that we do not find such an effect for the 60–64 age group further supports our claim. However, this is somewhat different in the 2005–10 period, where we find significance for the 60–64 age group, which in this period would include men who are all already pension-eligible. This may reflect the effects of worsening unemployment or higher mortality rates. The very strong negative 'age' effect found for the oldest group in both periods may be a reflection of increasing physical frailty, which would make it more likely that the older person's positioning remains stable. As expected, the oldest age group is also most likely to be censored through mortality.

The independent effect of living arrangements at the start of the period shows some interesting patterns in the two periods. In Period 1, being in arrangement 2 or 3 (both dependent positioning) significantly increases the likelihood of change, whereas being in 4 (productive) or 5 (other) decreases the likelihood of change. In the second period, the direction of the effects are the same but the significance is much stronger, pointing to the role of worsening employment prospects for younger household members. The absence of other sources of income combined with increased need for care-giving are likely to have altered the demand for older persons' productive contributions. It is also interesting that older persons living in arrangement 4 (productive) at the beginning of the period are significantly less likely to be censored in both periods. Socio-economic status has no influence on the likelihood of change in either period but has large negative effects on the likelihood of being censored. Nativity status has no effect on the likelihood of change or of being censored in either period.

We also conducted a more focused examination of the role of sex and age group at the start of the period on being in a productive role (categories 1 or 4) at the end of the period (results not shown). Surprisingly, neither sex nor age group had a significant effect on being in a productive role, going against our expectations that actual or anticipatory pension-eligibility effects may be reflected in age transitions, particularly for women. However, we did find that being in a productive role at the start of the period has a highly significant positive effect on being in that role at the end of the period, underscoring the apparent tenacity of the productive role despite ageing-related frailty, which is undoubtedly increasing. Interestingly,

being Mozambican-born works against being in a productive role in both periods, which may be attributable to difficulty in accessing the pension despite being legally eligible.[49]

Discussion

In this article, we examine how older rural South Africans' social positioning changes over time in a context marked by high unemployment, high HIV prevalence and the existence of an old-age pension system. We focus on two five-year periods (2000–2005 and 2005–10) distinguished by shifts in the HIV mortality profile, the roll-out of ART,[50] and the pension eligibility age for men. Our findings suggest that overall the social positioning of men and women over the age of 50 remains stable in both time periods. However, the stability is greater for those in a household living arrangement where they are likely to have a productive rather than a dependent role. Moreover, when we examine those who change living arrangements, we find that older persons are more likely to move into living arrangements in which they are likely to be in a productive position. We also find that such transitions become less common with age, when old-age physical frailty trumps the productive value brought through pension access and other care-giving roles. The differences across periods are not striking but do suggest that older persons' positioning as productive members is slightly more common in the second period, which may be a response to the very high rates of HIV mortality sustained in that period and worsening employment prospects. Surprisingly, we find few effects of the sex of older persons.

Perhaps the most interesting finding relates to the effects of age. Our findings contradicted our expectation that receipt of or anticipation of old-age pensions would influence transitions, particularly into productive roles. This suggests that social markers, such as providing care for older persons, may be more important at the oldest ages than economic value derived from pension access. The second period has the highest background levels of adult mortality, much of it attributable to HIV/AIDS, which can imply a pressure on older adults to care for children of deceased parents, irrespective of whether or not the older adults are eligible for pensions. The higher observed household changes in the second period can be driven by a demand for older adults to provide care, rather than the supply of extra income from the old-age pension. However, it would be premature to dismiss the pension effect outright, because there are likely to be a number of indirect effects not captured by our typology, including the positive effects on health and well-being of all members of the household.

While the findings of this article merit serious consideration, a number of limitations need to be understood. The 'other' category is difficult to understand conceptually and empirically as it contains a diverse array of arrangements. More work needs to be done to unpack this category and to validate the typology through application in other settings. Wilmoth[51] has criticised the regression approach as too simplistic, as it does not incorporate duration. Because our interest is in change and types of change, we consider this approach appropriate. It is also possible that our use of five-year periods does not account for changes that occur within smaller slices of time. However, smaller time periods produced too few events to merit analysis. Additionally, we do not differentiate between change caused by the older person moving and by the household composition changing due to ageing, or entry or

exit of other members. Moreover, mobility in the household related to labour migration is likely to play a critical role in conditioning the social positioning of older persons. On a more technical level, left censoring (that is, excluding those in-migrants who arrived at some point during the period) may produce a selection bias in our estimates, as we know that some returning migrants come back at older ages when they are ill. However, an equally large number of returned migrants have retired after a productive life as a labour migrant and are positively selected from being a migrant and surviving the rigours of the migrant workplace before returning. It can be expected that the positive and negative influences of returning migrants cancel each other out, and the resulting bias in the study may be minimal. Moreover, given that the AHDSS counts long-term circular migrants as members, we do not expect this to be a serious omission. However, there may be merit in exploring more dynamic event-history modelling that could account for in-migrants after the start of the period. It is also clear that more work is needed on sex differences in these transitions. While we know that men have higher mortality rates at earlier ages, we do not have data on the timing of illness or detailed data on employment. In future work, we plan to integrate the World Health Organisation Study of Global Ageing (SAGE) data and adult health data to examine how the health status of older men and women affect living arrangements, and vice versa.

The typology we utilise is an improvement on existing measures of living arrangements, which rely on headship, or broad categories of nuclear and extended. Whereas rural South Africa has a number of unique features brought on by, but not limited to, apartheid, we are cautiously optimistic that the typology is applicable to a number of settings in the developing world and western contexts grappling with declining economic fortunes for younger generations. For example, demographers, using US data, have dispelled the myth that older persons are the primary beneficiaries of multi-generational co-residence and instead show that it is the older generation that is supporting the younger.[52] In addition, evidence that pensions provide support not only to older persons but also to their households in other lower- and middle-income countries suggests that older persons continue to contribute to their households.[53] However, it is important to assess other cultural, social and economic features that might affect the meaning and measurement of productive and dependent status in other settings. Despite these issues, we feel that this analysis makes an important contribution to the growing literature on ageing in sub-Saharan Africa and to policy discussions about ensuring older persons' well-being. In particular, we hope that our use of life course theory offers new ideas for life course scholars interested in better understanding 'old age', particularly as this life stage lengthens in time, and defies assumptions about its significance in biological and social time.

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Table 1

Descriptive characteristics of older persons, Agincourt HDSS, 2000

	men N (col %)	women N (col %)	total
age group			
50–54	834 (27.1)	914 (20.6)	1,748
55–59	603 (19.6)	770 (17.3)	1,373
60–64	588 (19.2)	750 (16.9)	1,338
65+	1,049 (34.1)	2,010 (45.2)	3,059
socio-economic status			
1 (poorest quintile)	442 (14.4)	606 (13.6)	1,048
2	457 (14.9)	740 (16.7)	1,197
3	569 (18.5)	944 (21.2)	1,513
4	616 (20.0)	919 (20.7)	1,535
5 (wealthiest quintile)	798 (26.0)	952 (21.4)	1,750
nativity status			
South African	2,090 (67.9)	3,120 (70.2)	5,210
Mozambican	979 (32.1)	1,319 (29.8)	2,298
N	3,074	4,444	7,518

Table 2

Stability, change and censoring in living arrangements by sex and age group and by category at start of period in 2000–2005 and 2005–10, Agincourt HDSS

	no change N (row %)	change N (row %)	censored N (row %)	N
Period 1: 2000–2005				
sex				
female	2,251 (50.6)	1,107 (24.9)	1,094 (24.6)	4,452
male	1,373 (44.6)	739 (24.0)	964 (31.4)	3,076
age 2000				
50–54	833 (47.7)	528 (30.2)	386 (22.1)	1,747
55–59	700 (51.0)	347 (25.3)	326 (23.7)	1,373
60–64	665 (49.7)	340 (25.4)	333 (24.9)	1,338
65+	1,414 (46.2)	631 (20.6)	1,013 (33.1)	3,058
category 2000				
single gen.	290 (45.6)	79 (12.4)	267 (42.0)	636
two gen.	279 (30.1)	377 (40.6)	272 (29.3)	928
linear linked	411 (38.2)	400 (37.2)	264 (24.6)	1,075
complex linked	1,434 (56.1)	542 (21.2)	579 (22.7)	2,555
other	1,184 (51.3)	448 (19.4)	676 (29.3)	2,308
N	3,624	1,846	2,058	7,528
Period 2: 2005—2010				
sex				
Female	2,526 (51.2)	1,272 (25.8)	1,135 (23.0)	4,933
Male	1,436 (44.3)	839 (25.9)	965 (29.8)	3,240
age 2005				
50–54	970 (47.9)	628 (31.0)	429 (21.1)	2,027
55–59	741(48.1)	455 (29.5)	346 (22.4)	1,542
60–64	608 (52.6)	303 (26.2)	244 (21.2)	1,555
65+	1,624 (47.3)	725 (21.1)	1,081 (31.6)	3,430
category 2005				
single gen.	339 (51.4)	53 (8.0)	267 (40.5)	659
two gen.	332 (34.7)	418 (43.6)	208 (21.7)	958
linear linked	469 (41.8)	492 (43.9)	161 (14.4)	1,122
complex linked	1,830 (60.9)	644 (21.4)	532 (17.7)	3,006
other	941 (39.6)	504 (21.2)	932 (39.2)	2,377
N	3,943	2,111	2,100	8,154

Table 3

Transition probabilities of change between living arrangements in 2000–2005 and 2005–10, Agincourt HDSS, N (%)

	2005					
2000	**1**	**2**	**3**	**4**	**5**	**N**
single gen. (1)	0 (0)	11 (0)	2 (0)	28 (1)	38 (1)	79
two gen. (2)	21(1)	0 (0)	98 (3)	188 (6)	70 (2)	377
linear linked (3)	9 (0)	48 (2)	0 (0)	242 (8)	101 (3)	400
complex linked (4)	40 (1)	69 (2)	248 (8)	0 (0)	185 (6)	542
other (5)	70 (2)	54 (2)	105 (3)	219 (7)	0 (0)	448
N	140	182	453	677	394	1,846
	2010					
2005	1	2	3	4	5	**N**
single gen. (1)	0 (0)	9 (0)	4 (0)	19 (1)	21 (1)	53
two gen (2)	33 (2)	0 (0)	94 (4)	236 (11)	55 (3)	418
linear linked (3)	19 (1)	64 (3)	0 (0)	324 (15)	85 (4)	492
complex linked (4)	50 (2)	77 (4)	320 (15)	0 (0)	197 (9)	644
other (5)	82 (4)	61 (3)	98 (5)	263 (12)	0 (0)	504
N	184	211	516	842	358	2,111

Table 4

Multinomial regression results predicting likelihood of experiencing change and being censored relative to not changing in 2000–2005 and 2005–10, Agincourt HDSS

	Period 1: 2000–2005		Period 2: 2005–2010	
	change vs no change Coeff. (SE)	**censored vs no change Coeff. (SE)**	**change vs. no Change Coeff. (SE)**	**censored vs no change Coeff. (SE)**
sex of older person				
male	Ref	Ref	Ref	Ref
female	.045 (.051)	−.437 (.056)***	−.060 (.047)	−.498 (.056)***
age group at start period				
50–54	Ref	Ref	Ref	Ref
55–59	−.215 (.089)*	.027 (.092)	−.008 (.083)	.102 (.092)
60–64	−.141 (.092)	.142 (.092)	−.218 (.092)*	−.047 (.102)
65+	−.219 (.081)**	.548 (.082)***	−.241 (.074)***	.429 (.076)***
typology at start of period				
single gen. (1)	Ref	Ref	Ref	Ref
two gen. (2)	1.58 (.175)***	.289 (.149)	2.06 (.192)***	.090 (.141)
linear linked (3)	1.29 (.176)**	.097 (.146)	1.95 (.193)***	−.437 (.147)**
complex linked (4)	.362 (.160)*	−.361 (.123)***	.852 (.181)***	−.621 (.114)***
other (5)	.343 (.165)*	−.057 (.124)	1.25 (.184)***	.599 (.114)***
SES at start of period				
1 (poorest)	Ref	Ref	Ref	Ref
2	−.007 (.132)	−.335 (.112)**	−.130 (.119)	−.328 (.103)***
3	−.082 (.127)	−.543 (.111)***	−.044 (.119)	−.505 (.106)***
4	−.127 (.129)	−.713 (.117)***	−.076 (.119)	−.627 (.106)***
5 (wealthiest)	−.094 (.131)	−.884 (.118)***	.140 (.121)	−.873 (.112)***
nativity status				
South African	Ref	Ref	Ref	Ref
Mozambican	.057 (.089)	.013 (.082)	.109 (.081)	−.066 (.076)
pseudo R^2	.0427	.0427	.0685	.0685
N	7,024	7,024	7,847	7,847