

*Paper prepared for The 6<sup>th</sup> African Population Conference (UAPS),  
Ouagadougou, Burkina Faso, December 5-9, 2011.*

**Session 80, “Status and patterns of African fertility transitions”**

(Stan Becker)

**Fertility decline in South Africa:  
the end of the first fertility transition?**

Michel Garenne (1,2,3)

Benjamin Sartorius (3)

Latifat Ibisomi (3)

& the Agincourt Team (3)

(1) Institut de Recherche pour le Développement (IRD), Paris, France

(2) Institut Pasteur, Epidémiologie des Maladies Emergentes, Paris, France

(3) Witwatersrand University, School of Public Health, Johannesburg, South Africa

Contact: Michel.Garenne@pasteur.fr

Words: 2700

Tables: 3

Figures: 5

Revised, November 25, 2011

## **Abstract**

The paper discusses how to characterize the end of the first fertility transition in South Africa. For the country as a whole, fertility decline has been steady since the 1970's and reached a plateau around a Total Fertility Rate (TFR) equal to 2.6 children per woman in the late 1990's. Since then, the level of fertility has been roughly stable nationwide, as it is the case in the Agincourt DSS site. This level of TFR corresponds to replacement fertility in a context of very high mortality due to HIV/AIDS. The TFR can be decomposed into premarital fertility of about 1.4 children per woman and a marital fertility of about 1.2 children per woman. Marital fertility in 2006 was identical for the four population groups, whereas premarital fertility varied by a ratio of 1 to 10. South Africa is in a new situation of fertility at replacement level because of HIV/AIDS, a very low marital fertility corresponding to a second fertility transition, and still a TFR well above 2.1 due to an exceptionally high level of premarital fertility. This new situation seems to be peculiar to Southern Africa.

**Key Words:** First fertility transition; Second fertility transition; Premarital fertility; Ethnic differences; South-Africa; Agincourt.

## **Introduction**

The first fertility transition is characterized by a change from high level of natural fertility (average of 6 children per woman and ranging from 4 to 8 children per woman), to low levels, considered to be around 2 children per woman, which is close to the level of replacement fertility (about 2.1 children per woman in Western Europe). This process takes usually some two generations (60 years), although it can be much quicker (as in China or Thailand) or much longer (as in France). The fertility transition has been extensively described in Europe, as well as in selected developing countries such as Thailand and China, and in African and other developing countries. [Coale & Watkins 1986; Knodel et al. 1987; Peng 1998; Bongaarts 2008; Caldwell & Caldwell 1993; Cohen 1993; Shapiro & Gebreselassie 2008; Sneeringer 2009]

The first fertility transition may be followed by a second transition, where fertility drops again after a period of stable values around 2 children per woman. This is the case now in a number of European countries (Germany, Italy, Spain, etc.), and is also found in other places, such as Japan and Russia. These new phenomenon are recent, and seem closely associated with changing patterns of marriage and changing fertility preferences associated with modernization. [van de Kaa 1984; Lesthaeghe & Moors 2000; Lesthaeghe & Surkyn 2004]

In most countries, the main feature of the first fertility transition was a strict control of marital fertility (birth after the first marriage), since premarital fertility (birth before the first marriage) was small in comparison, accounting for a few percent of the total fertility in Europe. However, this is no always the case, and for instance some African countries, as well as some population groups (as the African/American group in the United States), may have high level of premarital fertility, with a very different dynamics. This is in particular the case in South Africa, where age at marriage is very high and premarital fertility highly prevalent. [Garenne & Zwang; 2004; 2006a; 2006b; Zwang & Garenne 2008]

## **Fertility in South Africa**

Fertility trends and patterns in South Africa were poorly documented until recently due to a lack of data. If birth registration has a long history in South Africa, it covered

primarily the White/European sub-group, and to a lesser extent the Indian/Asian sub-group. Coverage of the two other groups (Black/African and Coloured) was very weak at least until 1994. Data from censuses and surveys conducted before 1980 were poorly accessible, and the few publications available were often restricted to readers in Afrikaans. Furthermore, some of the data covered only parts of the country, the so-called TBVC states being often excluded (Transkei, Bophutatswana, Venda, Ciskei).

Several reconstructions of national fertility trends were conducted. Mostert [1972, 1978, 1991, 1998] studied census and survey data available in the 1990's and produced a series of estimates of fertility trends. Moultrie [2002] devoted his PhD dissertation to the topic, and produced new estimates using the more recent and more precise 1998 DHS survey. [Moultrie & Timaeus, 2002 & 2003] Other syntheses and further analysis are also available, with focus on differences by population group, and on adolescent fertility. [Chimere-Dan 1997; 1997; Udjo 2003; Oosthuizen 2000]

Some local data were also analyzed in particular data from two Demographic Surveillance Systems (DSS): that of Agincourt DSS in rural Mpumalanga, and that of Hlabisa DSS, also called ACDIS or Africa Center. [Camlin et al. 2004; Moultrie et al. 2008; Garenne et al. 2007]

Altogether, these various studies concluded to a steady and rapid decline of fertility since the early 1970's for most population groups, and an earlier decline for the White/European group. There were some minor discrepancies between the various estimates, but the overall pattern remained consistent despite data limitations, and despite the provincial and urban/rural variations. The main driver of the fast fertility decline in South Africa was the launching of a large scale family planning program in 1974, which reached even the most remote areas within a few years. As a result contraceptive prevalence increased quickly, and fertility dropped everywhere within a few years, in all provinces, in urban and rural areas alike, and for all social groups. [Mostert, 1978; Kaufman 1996; 1998; Kaufman et al. 2000; Lötter & van Donder 1974]

Compared with other countries in the world, two patterns emerged as major features of fertility trends in South Africa: the large variations by population groups, and the outstanding role played by premarital fertility (fertility before first marriage) for the Black/African group and for the Coloured group. This high level of premarital fertility is due to the very late age at marriage, to the large proportion of women who never marry, and to the lack of contraception among adolescents and very young adults. [Kaufman et al. 2000; Preston-White & Zondi 1992; Makiwane 2010; Garenne et al. 2000; Garenne & Zwang 2006b]

The aim of this paper is to shed some new light on the recent trends in fertility in South Africa, with focus on the end of the fertility transition. Is the first fertility transition coming to an end? Has the second fertility transition already started? Is the threshold of replacement fertility achieved, and for which population group? What is the relationship between total fertility and net reproduction in the context of outstanding mortality for young adults? What are the respective levels of premarital and marital fertility? How do they differ by population group?

## **Data and Methods**

### National data

To reconstruct the path and the current situation of the fertility transitions in South Africa, several individual data sets were used, all in open access: the censuses available at IPUMS and the DHS survey available at Macro International [see web sites]. The 1996 census provided Completed Family Size (CFS) for all cohorts aged 50 and above. The 2001 Census (10% sample) and the 2007 Community Survey provided cohort fertility (CFS) for women aged 46-50 and period fertility based on births in the past 12 months. All calculations for cohort and period estimates using census data were direct and without any adjustment. The 1998 DHS provided full maternity histories, which allow one to reconstruct past fertility in the previous 10 years, based on cumulative fertility by age 40, and corrected to obtain the TFR at age 50. The method for handling DHS data was presented elsewhere [Garenne & Joseph, 2002; Garenne 2008; 2009]. All census and survey data are available for the four official population groups (Black/African, Coloured, Indian/Asian, White/European).

In addition to census and survey data, we also used vital registration data. Birth registration was defective before 1994, but its coverage increased dramatically since, reaching almost completeness by year 2010. Furthermore, late registration (registration months or years after birth) allowed reconstructing the series of births since 1994 with some confidence. Registered births were divided by the population of women aged 15-49 in order to calculate the General Fertility Rate (GFR). Unfortunately, registered births are not available by population group.

## Agincourt DSS

We also used the Agincourt Demographic Surveillance System (DSS) data. This longitudinal study has been presented in detail elsewhere [Tollmann et al. 1997] In brief, it is a standard DSS (local population register), which covers a population of about 70,000 persons since 1992, and was extended to about 90,000 persons in 2007. The population is exclusively rural and from the Shangaan ethnic group, and lives in the north-eastern part of the Mpumalanga province.

## Mortality data

In order to calculate the net reproduction rate in 2006, we used the mortality data from the 2007 community survey. This survey recorded the deaths in the past 12 months in interviewed households, providing a full life table. Here again, survey data were used without any adjustment. The  $TFR_0$  corresponding to a  $NRR_0 = 1$  was obtained by dividing the TFR by the NRR in 2006.

## Premarital fertility

Premarital fertility was obtained by separating births last year among never married women in census data. For the 1998 DHS survey, all births can be classified as premarital or marital because the date of the first marriage is available. More details on premarital fertility can be found elsewhere. [Garenne & Zwang 2006b; Garenne et al. 2000]

## **Results**

### National trends

The course of the fertility transitions in South Africa could be described by displaying trends in cohort and period fertility, and by matching period ( $t$ ) with cohorts born 30 years before. For the country as a whole, cohort fertility peaked at 5.1 children ever born per woman for cohorts born in 1925-1934. Since then it has been declining steadily, reaching 3.4

children for cohorts born in 1957-1966. Period fertility showed a parallel decline at similar levels, from a value of 4.0 children in 1986 to 2.7 children in 2006. This last point available is very close to replacement fertility, estimated at 2.5 children in 2006. [Table 1, Figure 1]

The survey data indicated a slowing of the fertility decline since the late 1990's, and the last point available (TFR= 2.7 in 2006) was only slightly lower than the previous point (TFR= 2.9 in 2001). Vital registration data indicated rather a constant value of the GFR between 2000 and 2008, with minor fluctuations, after years of steep decline. [Figure 2] Altogether, the core of the first fertility transition seems to have occurred between 1970 and 2000, and fertility seems to have reached some kind of plateau between 2000 and 2008, suggesting the end of the first phase of the fertility transition.

### Trends by population group

Fertility trends differed markedly between the four populations groups. For Black/Africans, trends were similar to the national average, because this group already accounts for about three fourth of the population. Peak fertility was reached for cohort 1920-1924 (5.7 children), and the lowest value of period fertility was 2.8 children in 2006, close to replacement fertility estimated at 2.6 children in the same year. [Table 1&2; Figure 3]

The Coloured group followed a similar pattern: a peak of fertility of 5.8 for cohorts born in 1920-1924, following a period of rise due to a fall in infertility, and a smooth transition landing to about 2.8 children in 1996, followed by a short plateau, and a new recent decline (2.4 children in 2006), reaching again values close to replacement fertility (2.2 children in 2006).

The Indian/Asian group started from similar levels (5.3 children from cohorts born in 1920-1924), and had a faster transition, reaching near replacement fertility in 1996 (2.2 children). It continued along the same line, reaching 1.4 children in 2006. This group either had a baby bust effect (as in Sweden in 1930), or was already entering a second transition. Only further data will allow determining the nature of the recent low values.

The White/European group had a totally different history. The fertility transition followed a typical European pattern, and the cohorts born between 1900 and 1920 had already less than 3 children (2.7 on average). Cohort fertility increased somewhat later, as in many European countries, reaching a peak of 3.0 children for cohorts born in 1930-1934, followed by a new decline afterwards. Period fertility was probably fluctuating around 2.5 children for years, then started to decline rapidly after 1990, reaching 1.4 children in 2006. This is a clear

indication of a second demographic transition, similar to that seen in some of the European countries at about the same time.

### Role of premarital fertility

Ironically, despite relatively large differences in total fertility in year 2006, marital fertility was the same in all four population groups (average = 1.2 children per women). [Table 3; Figure 4] All differences in TFR by population group could be accounted for by premarital fertility. Black/African had the highest level of premarital fertility (1.6 children per woman), followed by Coloured (1.2 children per women), whereas in the two other groups premarital fertility was negligible (0.17 children for Indian/Asian and 0.16 children for White/European). This shows that fertility after the first marriage is under control in all four groups, with similar behaviors, whereas what is going on before the first marriage varies enormously. The ratio of premarital fertility between Black/African and White/European was 11 to 1, whereas the ratio of marital fertility is 1 to 1. This was due in part to different median age at marriage (32.9 years and 25.2 years respectively), but above all to lack of contraception before first marriage among the Black/African population.

Trends over time indicate that marital fertility tended to decline over time, and to converge to 1.2 children per woman by year 2006 for the four groups, despite large differences 25 years before (range from 2.2 to 3.2 children). On the opposite, trends in premarital fertility were divergent. The level of premarital fertility remained stable at very low levels for Indian/Asian and for White/European groups, (< 0.2 children per woman), was stable at high levels for the Coloured group (1.3 children per woman), but was increasing for the Black/African group (from about 1.2 to 1.6 children per woman).

### Agincourt

Agincourt data showed trends similar to the average of Black/African group. Fertility dropped from about 5.5 children per woman in the mid 1970's to 2.9 children in 1995, then fluctuated with ups and downs between 1995 and 2010 (maximum of 3.0, minimum of 2.3 children per women). The last point available (2010) was just below replacement fertility (2.4 children per woman). This included about half of premarital fertility, which makes marital fertility well below replacement, as for the rest of the country. Note that premarital fertility in Agincourt did not decline over the prospective period (1992-2010), and rather increased in the



most recent period, whereas marital fertility dropped to very low levels, as for the Black/African population nationwide. This recent evolution of marital fertility is similar to that in countries well engaged into the second demographic transition. [Figure 5]

## **Discussion**

In this study we showed new patterns of the fertility transitions. In South Africa, the first fertility transition defined by achieving a level near or below replacement fertility has been already completed. In terms of marital fertility, the country seems already into the second fertility transition, with a marital TFR of 1.2 children per woman, and this seems true for all population groups. However, the level of premarital fertility remains abnormally high for two population groups (Black/African and Coloured) with levels above or equal to the level of marital fertility. This is a new pattern of fertility transition, which requires further research.

There is no accepted definition of the end of the first fertility transition. If period replacement fertility is one possible criterion, then the first fertility transition is basically achieved in South Africa. This is in part due to the high level of mortality before age 50. Without HIV/AIDS, replacement fertility would be lower, and two population groups would not qualify for the end of the transition with the replacement level criterion. If a cohort CFS of two children per women is taken as a criterion, then Black/African and Coloured populations are still underway. However, if marital fertility is taken as a main criterion, as was done in Europe to characterize the transition, then the country is well into the second demographic transition, and this is true for all population groups. This is a very new situation, which calls for further attention.

In South Africa, the number of births still largely exceeds the number of deaths, mostly because of a favorable age structure, with a large population aged 15-49 years. So, taking nil population growth as a criterion, South Africa is still away from stabilization. On one hand, the number of births has been roughly constant over the past 15 years, so that the number of births is likely to be decreasing in the near future. On the other hand, mortality has been going down since 2006 as a result of Anti-Retro-Viral therapy (ARVs), after years of large increase in number of deaths, so that there is still a prospect for population growth in the coming years. This shows the complexity of the demographic dynamics in South Africa, and the difficulty in making a judgment based on former European experience. We are facing new

situations, which call for more in-depth research. In this respect, more attention should be devoted to premarital fertility, and its trends and patterns.

## References

- Bongaarts J. (2008). Fertility transitions in developing countries: progress or stagnations ? *Studies in Family Planning*; 39(1):105-110.
- Caldwell JC & Caldwell P. (1993). The South African fertility decline. *Population and Development Review*; 19(2):225-262.
- Camlin C, Garenne M, Moultrie T. (2004). Fertility trends and patterns in a rural area of South Africa in the context of HIV/AIDS. *African Journal of Reproductive Health*; 8(2):38-54.
- Chimere-Dan O. (1997). Recent Fertility Patterns and Population Policy in South Africa. *Development Southern Africa*; 14(1):1-20.
- Coale AJ, Watkins SC (editors). (1986). *The Decline of Fertility in Europe: the Revised Proceedings of a Conference on the Princeton European Fertility Project*. Princeton University Press.
- Cohen B. (1993). Fertility levels, differentials, and trends. In: Foote KA, Hill KH and Martin LG (eds.). *Demographic Change in Sub-Saharan Africa*. Washington DC: National Academy Press: 8-67.
- Garenne M, Tollman S, Kahn K. (2000). Marital and premarital fertility in a rural area of South Africa: a challenge to existing population policy. *Studies in Family Planning* 31(1):47-54.
- Garenne M, Joseph V. (2002). The timing of the fertility transition in sub-Saharan Africa. *World Development*; 30(10): 1835-1843.
- Garenne M, Zwang J. (2004). Social change and premarital fertility in Madagascar. *Southern African Journal of Demography*; 9(1):27-48.
- Garenne M, Zwang J. (2006a). Premarital fertility in Namibia: levels, trends and factors. *Journal of Biosocial Science*; 38(2):145-167.
- Garenne M, Zwang J. (2006b). Premarital fertility and ethnicity in Africa. *DHS Comparative Reports* No. 13. Calverton, Maryland, USA: Macro International Inc. 87 p.
- Garenne M, Tollman S, Kahn K, Collison M. (2007). Fertility trends and net reproduction in Agincourt: 1992-2004. *Scandinavian Journal of Public Health*; 35(Suppl. 69), pp. 68-76.
- Garenne M. (2008). Fertility changes in sub-Saharan Africa. *DHS Comparative Report, No 18*, Calverton, Maryland, USA: Macro International Inc., 128 p.

- Garenne M. (2009). Situations of fertility stall in sub-Saharan Africa. *African Population Studies*; 23(2): 173-188.
- Kaufman CE. (1996). The politics and practice of reproductive control in South Africa: a multilevel analysis of fertility and contraceptive use. Unpublished PhD thesis, University of Michigan, Ann Arbor, 1996.
- Kaufman CE. (1998). Contraceptive use in South Africa under apartheid. *Demography*; 35(4): 421-434.
- Kaufman CE, de Wet T, Stadler J. (2000). *Adolescent Pregnancy and Parenthood in South Africa*. Monograph 136. New York: Population Council.
- Knodel JE, Chamrathirong A, Debavalya N. (1987). *Thailand's Reproductive Revolution: Rapid Fertility Decline in the Third World Setting*. University of Wisconsin Press.
- Lesthaeghe R, Moors G. (2000). Recent trends in fertility and household formation in the industrialised west. *Review of Population and Social Policy*; 9: 121-170.
- Lesthaeghe R, Surkyn J. (2004). Value Orientations and the Second Demographic Transition (SDT) in Northern, Western and Southern Europe: An Update. *Demographic Research*; Special Collection 3: 45-86.
- Lötter JM, van Tonder JL. (1976). *Fertility and Family Planning among Blacks in South Africa: 1974*. Report S-39. Pretoria: Human Sciences Research Council.
- Makiwane M. (2010). The Child Support Grant and teenage childbearing in South Africa. *Development Southern Africa*; 27(2): 193-204.
- Mostert WP, et al. (1998). *Demography: Textbook for the South African Student*. Pretoria: Human Sciences Research Council, 1998.
- Mostert WP. (1978). Gesinsbeplanning in 1977 (family planning in 1977). *Journal of Racial Affairs*; 29(3): 86-88.
- Mostert WP. (1972), *Die Gesinsbouproses by Bantoes in die Metropolitaanse Gebied van Durban. (The Family Building Process among Bantus in the Metropolitan Area of Durban)*. Report S-16. Pretoria: Human Sciences Research Council.
- Mostert WP, du Plessis JL. (1972). *Die Gesinsbouproses by Bantoes in die Metropolitaanse Gebied van Pretoria (The Family Building Process among Bantus in the Metropolitan Area of Pretoria)*. Report S-17. Pretoria: Human Sciences Research Council.
- Mostert WP, van Eeden IJ. (1972). *Die Gesinsbouproses by Bantoes in die Metropolitaanse Gebied van Johannesburg: Soweto (The Family Building Process among Bantus in the Metropolitan Area of Johannesburg: Soweto)*. Report S-18. Pretoria: Human Sciences Research Council.

- Mostert WP. (1991). Recent fertility trends in South Africa. In: W Mostert & J Lotter (eds). *South Africa's demographic future*. Pretoria: Human Sciences Research Council.
- Moultrie TA. (2002). *Apartheid's children: social institutions and birth intervals during the South African fertility decline, 1960-1998*. Unpublished Ph.D thesis, University of London, London, United Kingdom.
- Moultrie TA, Timæus IM. (2002). *Trends in South African fertility between 1970 and 1998: An Analysis of the 1996 Census and the 1998 Demographic and Health Survey*. Medical Research Council, South Africa. (available at: <http://www.mrc.ac.za/bod/trends.pdf> )
- Moultrie TA, Timæus IM. (2003). The South African fertility decline: evidence from two censuses and a Demographic and Health Survey. *Population Studies*; **57**: 265-283.
- Moultrie TA, Hosegood V, Mcgrath N, Hill C, Herbst K, Newell ML. (2008). Refining the criteria for stalled fertility declines: an application to rural Kwazulu-Natal, South Africa, 1990-2005. *Studies in Family Planning*; 39(1): 39-48.
- Oosthuizen K. (2000). Demographic changes and sustainable land use in South Africa. *Genus*; 56(3-4): 81-107.
- Peng P. (1998). Causes and consequences of fertility decline in China. *China Population Today*; 15(3): 5-10.
- Preston-Whyte EM, Zondi M. (1992). African teenage pregnancy: whose problem? In: Burman S and Preston-Whyte EM (Eds.). *Questionable Issue: Illegitimacy in South Africa*. Oxford: Oxford University Press.
- Shapiro D, Gebreselassie T. (2008). Fertility transition in sub-Saharan Africa: falling and stalling. *African Population Studies*; 23: 3-23.
- Sneeringer SE. (2009). Fertility Transition in Sub-Saharan Africa: A Comparative Analysis of Cohort Trends in 30 Countries. *DHS Comparative Reports No. 23*, Calverton, Maryland: ICF Macro.
- Tollman SM, Herbst K, Garenne M, Kahn K, Gear JSS. (1997). The Agincourt demographic and health study: site description, baseline findings and implications. *South African Medical Journal*; 89(8):858-864.
- Udjo EO. (2003). A re-examination of levels and differentials in fertility in South Africa from recent evidence. *Journal of Biosocial Science*; 35(1):413-431.
- van de Kaa D. (1987). Europe's second demographic transition. *Population Bulletin* 42 (1).
- Zwang J, Garenne M. (2008). Social context of premarital fertility in rural South-Africa. *African Journal of Reproductive Health*; 12(1): 97-109.

## Data and web sites

Demographic and Health Surveys. [www.measuredhs.com](http://www.measuredhs.com)

Department of Health, Republic of South Africa. *South Africa Demographic and Health Survey 1998: Final Report*. Pretoria: Department of Health, 2002.

IPUMS-International: <https://international.ipums.org>

Stats-SA. (2011a). Recorded live births, 2010. *Statistical Release P0305*. Pretoria, Statistics South Africa.

Stats-SA. (2011b). Mid-year population estimates, 2010. *Statistical Release P0302*. Pretoria, Statistics South Africa.

United Nations, Population Division. (2006). *World Population Prospects, the 2006 revision*. <http://esa.un.org/unpp>

Us Bureau of The Census, (2010), « International Data Base ». <http://www.census.gov/ipc/www/idb/>

Table 1: Estimates of cohort fertility (completed family size), South Africa /  
*Estimations de la fécondité des générations (taille des familles complètes), Afrique du Sud*

Source / Cohort	Mean number of children ever born (age 50 and above)				
	Total	Black/ African	Coloured	Indian/ Asian	White/ European
<i>Census, 1996</i>					
1900-09	4.96	5.46	5.24	5.23	2.85
1910-19	5.02	5.70	5.69	5.22	2.72
1920-29	5.10	5.72	5.73	5.11	2.92
1930-39	5.00	5.54	5.27	4.04	2.92
1940-49	4.34	4.93	4.17	3.18	2.55
<i>DHS-1998</i>					
1949-53	3.81	4.21	3.08	2.68	2.37
<i>Census, 2001</i>					
1951-60	3.48	3.83	2.94	2.49	2.15
<i>Census, 2007</i>					
1957-66	3.42	3.70	2.86	2.47	2.50

Source: Author's calculation from original data

Table 2: Estimates of period fertility (TFR), South Africa

*Estimations de la fécondité du moment (Indicateur Synthétique de Fécondité), Afrique du Sud*

Source / Period (mid-point)	Total Fertility Rate (TFR)				
	Total	Black/ African	Coloured	Indian/ Asian	White/ European
<i>DHS-1998</i>					
1986.5	3.96	4.37	3.21	2.54	2.56
1991.5	3.62	3.90	3.00	2.67	2.29
1996.5	3.07	3.23	2.76	2.19	2.18
<i>Census, 2001</i>					
2001.3	2.87	3.03	2.83	1.77	1.73
<i>Census, 2007</i>					
2006.6	2.63	2.81	2.42	1.44	1.44
<i>Replacement fertility (2006 data)</i>					
2006.6	2.52	2.63	2.18	2.10	2.08

Source: Author's calculation from original data

Replacement fertility = TFR necessary for ensuring NNR= 1 with fertility and mortality prevailing in 2006.



Table 3: Estimates of marital and premarital fertility, South Africa  
*Estimations de la fécondité maritale et prémaritale, Afrique du Sud*

Source / Period (mid-point)	Total Fertility Rate (TFR)				
	Total	Black/ African	Coloured	Indian/ Asian	White/ European
<i>DHS-1998 (Cohort)</i>					
- Premarital	1.05	1.25	1.24	0.33	0.06
- Marital	2.97	3.21	2.18	2.51	2.53
<i>DHS-1998 (Period)</i>					
- Premarital	1.13	1.24	1.23	0.05	0.06
- Marital	1.81	1.89	1.34	1.97	1.99
<i>Census, 2001(period)</i>					
- Premarital	1.40	1.56	1.38	0.15	0.18
- Marital	1.46	1.46	1.45	1.62	1.56
<i>Census, 2007 (period)</i>					
- Premarital	1.43	1.60	1.19	0.17	0.16
- Marital	1.24	1.22	1.23	1.27	1.28

Source: Author's calculation from original data

For 1998 DHS, cohort = women aged 45-49 at time of survey (mid-cohort= 1951); period= 5 years before survey. For censuses, period = 12 months before census.

Figure 1: Fertility trends in South Africa from census and surveys

*Tendances de la fécondité d'après les recensements et enquêtes, Afrique du Sud*

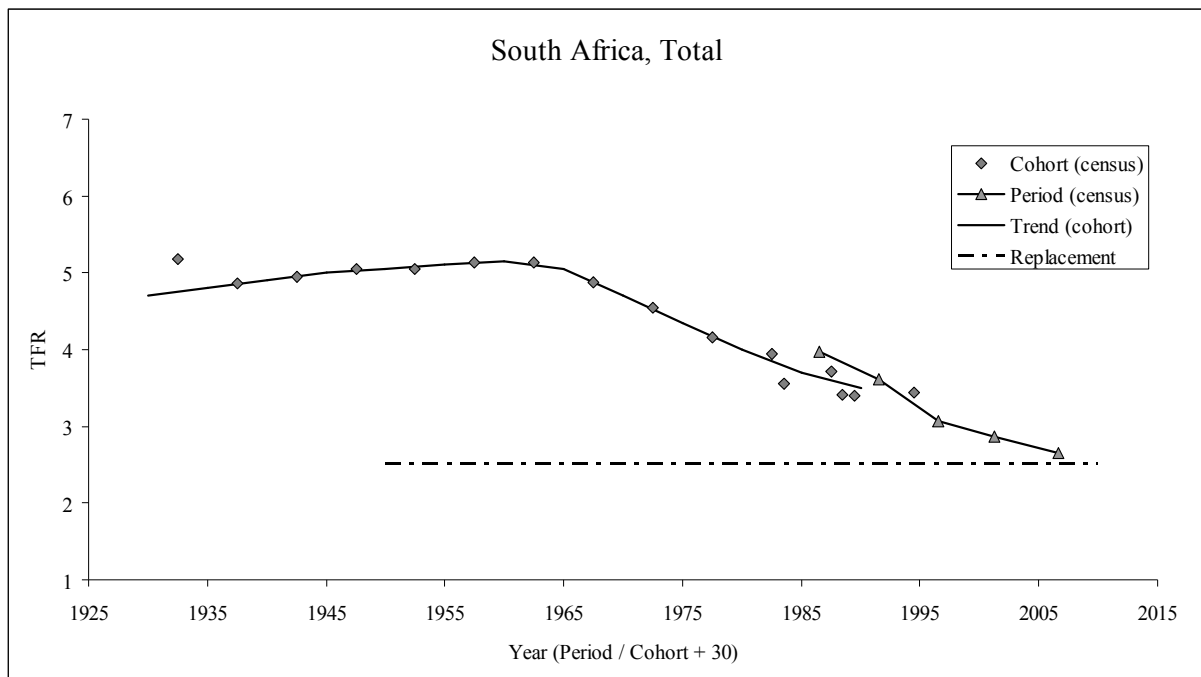


Figure 2: Trend in General Fertility Rate (GFR) from registered births in South Africa (including late registration), 1991-2008

*Tendances du taux général de fécondité selon les données de l'Etat Civil (incluant les enregistrements tardifs), Afrique du Sud*

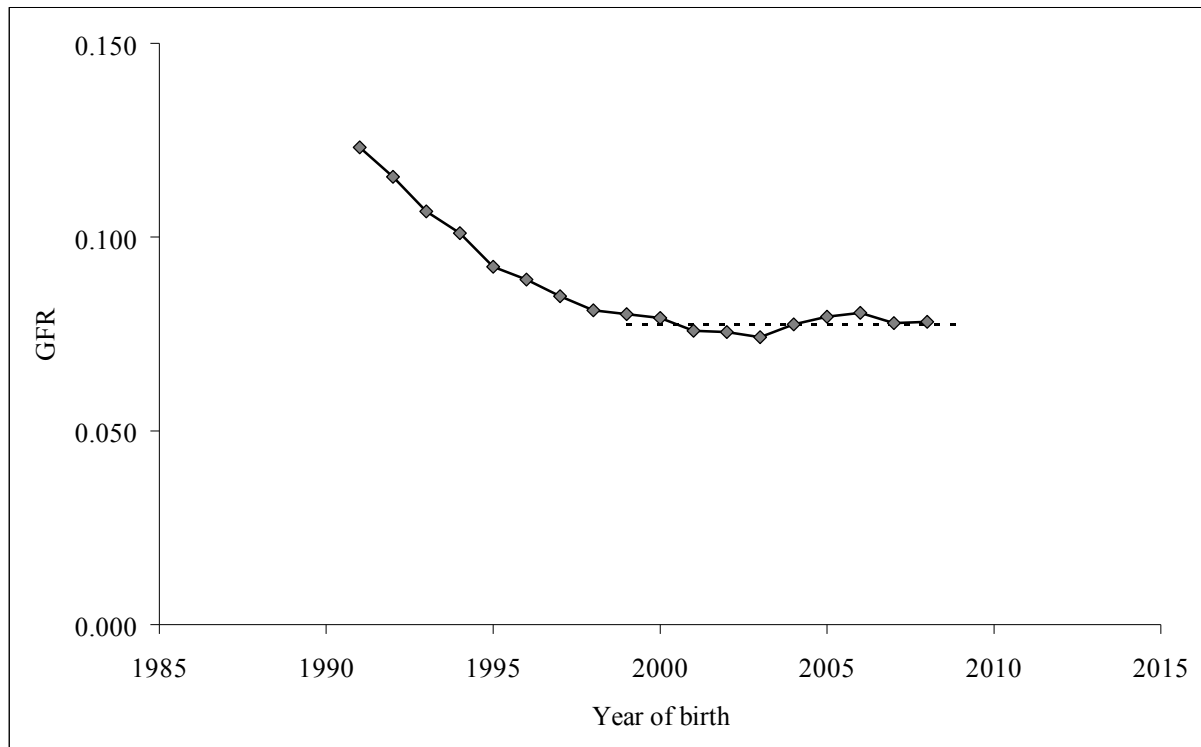


Figure 3: Fertility trends in South Africa, by population group

*Tendances de la fécondité selon les principaux groupes de population, Afrique du Sud*

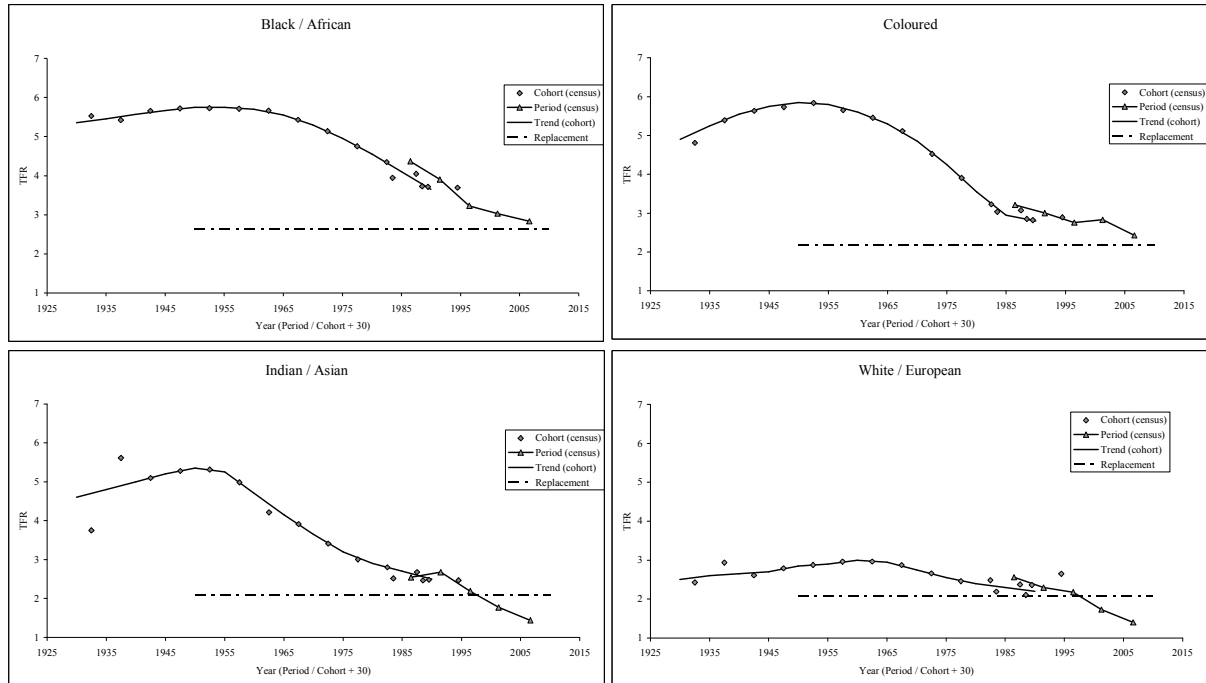


Figure 4: Premarital and marital fertility in South Africa, year 2006, by population group

*Niveaux de la fécondité maritale et prémaritale en 2006, selon les groupes de population, Afrique du Sud*

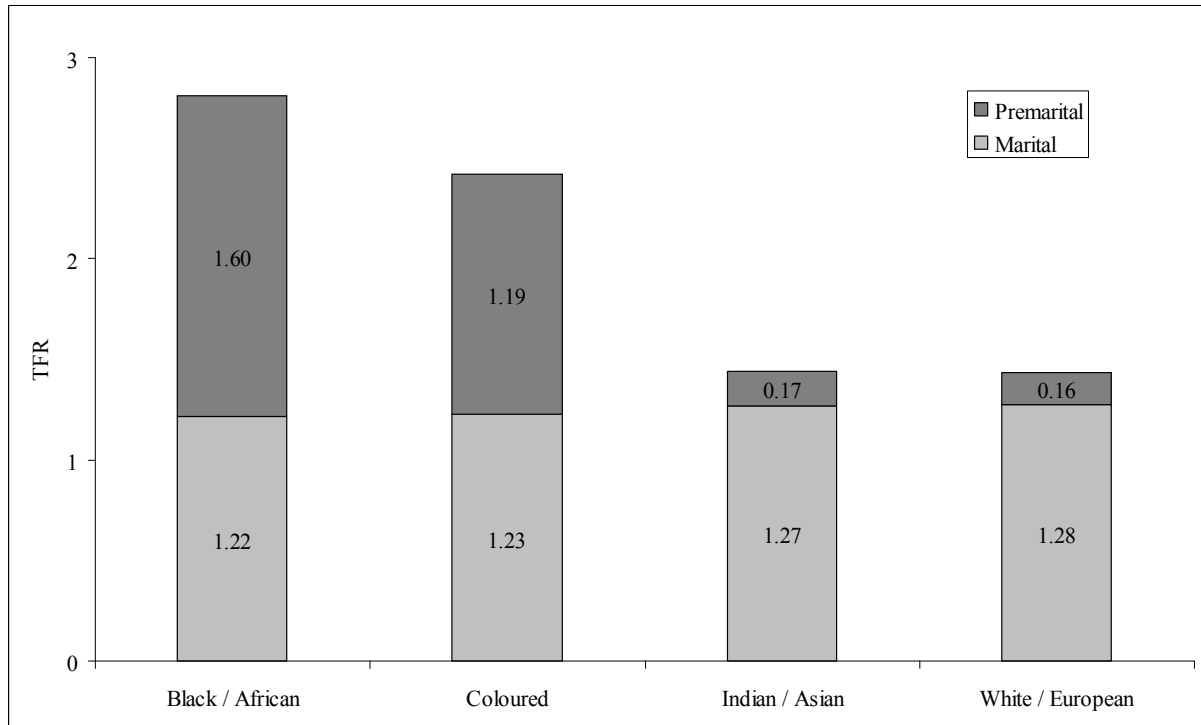
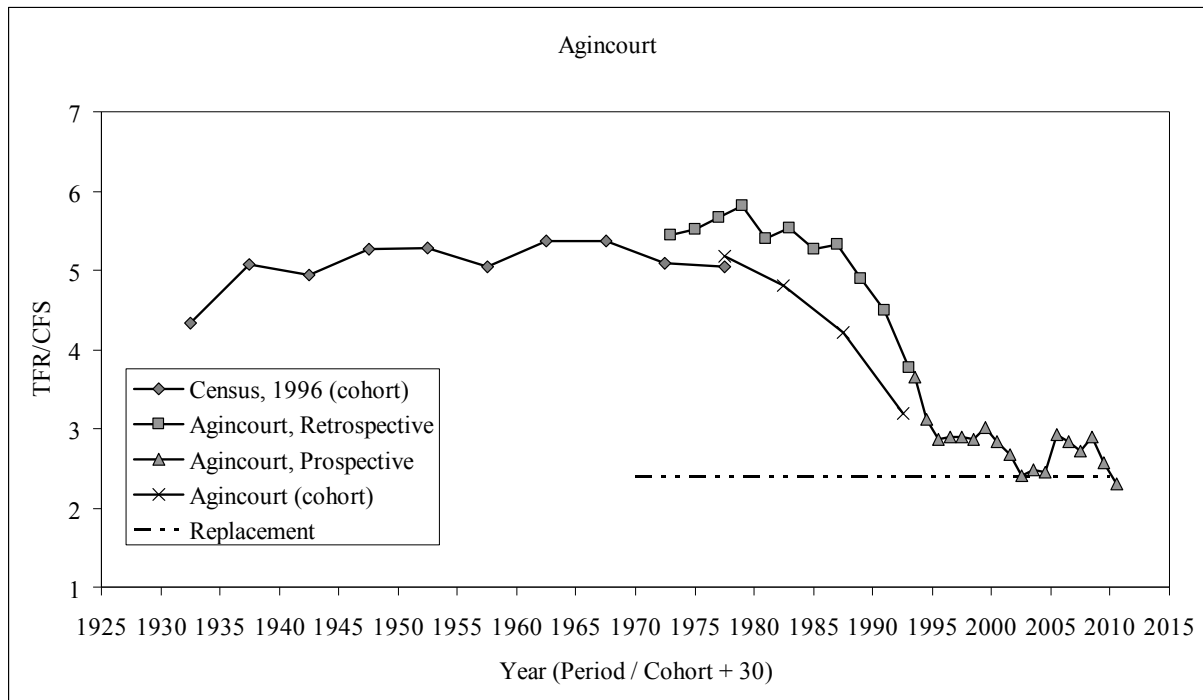


Figure 5: Fertility trends in Agincourt, South Africa

*Tendances de la fécondité à Agincourt, Afrique du Sud*



## Résumé en français

La communication porte sur la caractérisation de la fin de la transition de la fécondité en Afrique du Sud. Pour l'ensemble du pays, la fécondité baisse depuis le début des années 1970 et semble avoir atteint un plateau à un niveau de l'ISF de 2,6 enfants par femme dès la fin des années 1990. Depuis, le niveau de fécondité est resté assez stable, comme c'est le cas dans le site d'Agincourt, un observatoire démographique en milieu rural. Ce niveau de la fécondité du moment correspond à un niveau de remplacement dans un contexte de très forte mortalité due au VIH/sida. La fécondité du moment a deux composantes : un ISF prémarital d'environ 1,4 enfants par femme, et un ISF marital de 1,2 enfants par femme. De manière surprenant, l'ISF marital en 2006 était pratiquement identique pour les quatre groupes de population du pays, alors que la fécondité prémaritale varie d'un ratio de 1 à 10 selon le groupe. L'Afrique du Sud présente donc une nouvelle situation, où la fécondité du moment est à un niveau de remplacement du fait du VIH/sida, un niveau de fécondité maritale correspondant à la seconde transition démographique, malgré un ISF supérieur à 2,1 du fait de la très forte fécondité prémaritale. Cette nouvelle situation semble spécifique des pays d'Afrique australe.

**Mot Clés:** Première transition de fécondité ; Seconde transition de fécondité ; Fécondité prémaritale ; Ethnicité ; Afrique du Sud ; Agincourt.