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by: **Orieji Chimere-Dan**

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IN SEARCH OF EXPLANATIONS FOR FERTILITY AND REPRODUCTIVE BEHAVIOUR IN AFRICA

Orieji Chimere-Dan
Department of Sociology
University of the Witwatersrand

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DRAFT

Introduction

The assumption that the experiences of Western societies are the inevitable path for development in African[1] societies has for long guided demographic studies of African fertility and reproductive behaviour. Valid explanations of African fertility remain elusive partly because African demography has not seriously contested this assumption. This paper examines the problems in the explanations of fertility and reproductive behaviour in Africa from a demographic perspective. Two characteristics distinguish African fertility from fertility in other regions of the world. First, the level of fertility in the African region is the highest in the world. The most recent summary fertility data in Table 1 and the country figures in Table 2 show that the average African woman will have six children by the time she is 44 years old. Total fertility rate is clearly over 6 for most of the African countries shown. Secondly, Africa is the only region with no strong evidence of a systematic downward trend in fertility. In the last 30 years, considerable fertility decline has occurred in other regions of the Third World. From the second half of the 1960s to the beginning of the 1990s, fertility levels in the Third World fell by over 30%, with Eastern Asia experiencing the most rapid decline. Until the past five years, no evidence existed on national or sub-regional fertility decline in Africa with the exception of South Africa.

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[1] Unless otherwise stated, Africa in this paper refers to Sub-Saharan Africa.

Beyond these two features, recent reviews (Cochrane and Farid, 1989; Van de Walle and Foster, 1990) indicate that there exists no strong coherent body of knowledge on the determinants of fertility. Socioeconomic and cultural determinants of African fertility have been widely studies but there are differences in opinions about the relative contribution of these socioeconomic factors and cultural factors. There is little clarity about the effect of social and economic factors on African fertility. Education and urbanization effects are not as linear as expected. (Ashurst et al, 1984; United Nations, 1987a; Cleland and Rodriguez, 1988, Chimere-Dan, 1990). Neither relatively stable economy nor economic crises has so far shown important clear effects on African fertility. Non-western institutions such as polygyny and extended family network are associated with African fertility in ways that have not been clearly explained. Family planning programmes have, as yet, no discernible pattern of association with fertility in those African countries where they have a relatively long history.

Dominant theoretical approaches

Two sets of ideas shaped approaches to fertility in general and African fertility in particular. One of the earliest articulated provocative views on population was Malthus' pessimism about the consequences of the inverse relationship between the rate of population growth and the means of economic sustenance. His Essay on the Principle of Population (1798) was a reaction to the

English and French utopians of his time. Inspired by the poor social conditions in England, Malthus argued that population has a tendency to grow at a faster rate than the rate of increase in the means of subsistence. It was his view that unless people adopted preventive checks - late marriage and restrained from prolific childbearing, positive checks (e.g., poverty, diseases, epidemics, famine and wars) will result from rapid population growth. Malthus did not foresee the power of technological advances that in many societies altered the ratio of people to means of subsistence. In focusing exclusively on the relationship between population and agriculture, he has been accused of defending the interests of English land-owning class of the late 18th century. The most obvious contradiction of his predictions was the simultaneous increase in population and prosperity in 19th century Europe. Despite the theoretical and empirical weaknesses of this position, Malthusian thinkers today emphasize the threat posed to human survival by a high rate of fertility in the Third World. Their ideas gave legitimacy to the concepts of "overpopulation" and "the population time bomb". Especially in policy making circles, the list of Malthus' preventive checks were expanded by Neo-Malthusians to include the use of contraceptives.

The other major theoretical orientation is the theory of demographic transition which was first sketched in the 1920s and developed later by Notestein. This theory sees transition of fertility and mortality from high to low levels as an inevitable consequence of movement from traditionalism to modernity. In the first stage of this transition, fertility and mortality levels are

high. In a second stage, mortality declines but without a significant decline in fertility with the result that population growth rate is high. The last stage is when fertility begins to decline alongside mortality. Demographic transition is complete when both fertility and mortality fluctuate at very low levels (See figure 1). The theory was summarized by Demeny (1968) as follows:

> In traditional societies fertility and mortality are high. In modern societies fertility and mortality are low. In between, there is demographic transition.

In a further exposition of the theory, Coale (1973,p.65) stated the following three preconditions for a substantial decline in fertility:

> (1)Fertility must be within the calculus of conscious choice. Potential parents must consider it an acceptable mode of thought and form of behaviour to balance advantages and disadvantages before deciding to have another child..
>
> (2) Reduced fertility must be advantageous. Perceived social and economic circumstances must make reduced fertility seen an advantage to individual couples.
>
> (3)Effective techniques of fertility reduction must be available.

The theory is analogous to Rostow's stages of economic growth in economics and reflected the prevailing intellectual climate of the 1940s and 50s and the fascination with the construction of general deterministic models of social and economic progress.

An assessment of the relevance of the transition theory to the Third World countries has been carried out by Beaver (1975). It

is not a theory in a strict sense. It is merely a description of a pattern of demographic change in the specific European context. Its understanding and definitions of several concepts such as development, attitudes, values and rationality are culturally biased. It is ahistorical. It fails to recognize the social foundations of African reproductive systems. In summary transition theorists make an a prori assumption that African fertility will follow the pattern of European fertility transition, a position which is hard to sustain presently.

Contemporary explanations of fertility are based on the theory of demographic transition with a bias to economics. In general, economic approaches argue that fertility levels follow the principles of demand and supply. Versions of economic thinking on fertility in the literature range from plain economic determinism (Easterlin, 1975, 1978, Rosenzweig and Schultz, 1985) to refined postulations about social dimension of the cost of childbearing, changes in lifestyle and shifts in time constraints of having children (Lee and Miller, 1991; Donaldson, 1991).

Sociological contribution to the explanations of fertility look at the influences of social structure, institutions (Davis, 1955, McNicoll) and culture (Lorimer, 1954, Warwick, 1988). The most popular framework for sociological analysis of fertility was produced by Davis and Blake (1956). Surprisingly critical sociology has not shown sufficient interest on this subject which falls within its field of inquiry. Although there have been a few structualist work in fertility (see Harthworth, 1978), sociological approaches to fertility tend to be dominated by

functionalist and linear views of social change. These "modernization" views have been a target of marxist thinkers who rather see fertility and reproductive behaviour as ideologically constrained social phenomena. Marxists place emphasis on the class location of reproductive behaviour. Explanation of modes of production, social and class relations of production by default explains reproductive behaviour (Macfarlane, Mamdani, 1981, Meillassoux, 1983, Seccombe, 1983). This is a distinct contribution which gets blurred by any further steps to explain household economic dynamics that are associated with fertility. Once the issue of household labour organization, gender and intra-class fertility behaviour are taken up, marxist analysis unwittingly adopts a economic reductionist approach to fertility. Besides, the marxist approach is particularly weak in accounting for or integrating the household-based individual-level interactions of fertility and economy.

The individual-level biological component of fertility is linked to the social dimension by biosocial approaches that employ powerful techniques of individual-level accounting of biological and social determinants of fertility change (Bongaarts, 1978, Bongaarts and Potter, 1983; Hobcraft and Little 1984, Menken, 1989). The biosocial approach has provided some insight into the proximate routes through which social factors influence fertility, nonetheless within the framework of demographic transition theory. (Page and Lesthaeghe, 1981, Bongaarts et al 1984; Bongaarts and Frank 1991).

Studies in African fertility

Since the early 1960s, studies in African fertility have focused on two questions, namely, why fertility level is high and how it can be reduced. In the early 1970s a series of studies designed to measure knowledge of, attitude to and practice of contraception (KAP) among African women were carried out in West and Middle Africa. In the same period, the Population Council funded the Changing African Family Project with an emphasis on "change in fertility control or on "changes which may precede changes in fertility control". In a document that gave direction to the African component of the World Fertility Survey, Caldwell (1974) identified nine priority areas of fertility research in Africa as:

a. Search for better fertility measures.
b. Production of KAP-type information for francophone Africa.
c. Establishment of links between anti-natal practices and fertility levels.
d. Measurement of change over time in KAP indicators.
e. Search for how fertility decline or contraception or abortion practice starts.
f. Search for better understanding of economics of family size at the family level.
g. Measurement of change over time in the spread of antinatal practices.
h. Studies in the relationship between attitude,intentions and practice of fertility limitation.

i. Examination of the link between children education and fertility limitation.

These surveys are of central importance in African demography. They initiated the practice of surveying African societies on a large-scale with the belief that this approach can generate valid information. Secondly, the KAP and the World Fertility Surveys played a more subtle role. They introduced new concepts, ideas, and models around fertility and reproductive behaviour. The questionnaires and training provided to field workers equipped them not only as information gatherers but also as transmitters of Western norms of small family and alternative reproductive behaviour. Problems of contexualization of concepts, poor measurement, language and meaning were encountered in both the KAP and WFS in Africa. In retrospect, it is not entirely certain that these surveys contained the relevant data for adequate explanations of African fertility. The validity of findings based on the concept of KAP is suspect (Westoff, 1988). Despite the fact that the WFS is the most ambitious social science data gathering exercise in the 20th century, its African component left more questions unanswered than it started with. There were false hopes that the Demographic and Health Surveys that followed (1986-1992) would take explanations further. The DHS followed a biomedical emphasis and in some respects provided less sociologically relevant data for the explanation of African fertility. Although they had major social science inputs at all stages, the KAP, WFS and DHS projects in Africa had two general flaws that undermine their contribution to the explanation of fertility and reproductive behaviour. The quality of information they provided was poor

(UN, 1987b) and they lacked a strong theoretical base or focus.

Volumes of papers and reports have been published using information from these major cross-national surveys without major explanatory innovations with respect to fertility behaviour. Although not clearly visible, three strands of conclusions are found in existing literature on African fertility. The first is that African fertility is high because of low level socio-economic development. The second is that African fertility high and remains so because traditional pronatalist African culture which is inherently resistant to the idea of family limitation. Where some changes have been observed in African fertility, a third view attributes this to ideational rather than socio-economic or cultural factors. These explanations arise from the same presuppositions within the framework of the transition theory. Collective, they are results of the comparison of African fertility with Western models instead of examining fertility in its own right as a social phenomenon.

A major attempt to part with the traditional transition framework is Caldwell's hypothesis which was published under the ambitious title "A theory of fertility decline" (1982). With predominantly African data, Caldwell 1976, 1982) points out that though important, economic rationality is not the rationality in African reproductive system. Refinement of his ideas situates explanations of fertility and reproductive behaviour in the direction of intergenerational flow of household wealth (1982). In the present regime of high fertility in Africa, wealth flows from children to parents, hence the high economic value of

children. African fertility will decline significantly when there is a flow of wealth from parents to children, which by implication raises the economic cost of childbearing.

In a subsequent work (Caldwell and Caldwell 1987) he emphasised the African cultural contexts (Caldwell and Caldwell, 1987) and institutional factors (Caldwell and Caldwell, 1988) as pivotal in the understanding of African fertility. Caldwell views and writings on African fertility are as diverse as changes in his residence in different regions, professional and research activities. He doubts the suitability of the survey methodology for investigating African reproductive systems (Caldwell and Hill, 1988) and is pessimistic about the prospects for a sustained fertility decline in Africa without rapid economic growth (Caldwell, 1991). Considered as a whole, he comes nearest to questioning the assumptions underlying research on fertility in Africa. He challenges the uncritical importation of Western Judeo-Christian tradition and the concept of rationality into the different African situation. However, his wealth flow hypothesis is essentially a derivative of the transition theory with added anthropological insight and content. His work reflect acceptance of the presupposition that African societies will necessarily share the same routes to modernity with Western countries. In this sense the wealth flow hypothesis is merely an exposition of an aspect of the transition theory from the perspective of economic anthropology.

Malthusian ideas recently appeared in the form of "crisis-led fertility transition". This is the hypothesis that if people do

not reduce their family size under normal circumstances, they will do so when they face economic crises. Boserup (1985, 1986) makes an explicit and direct application of this hypothesis to African fertility. She sees the economic crisis in large parts of Africa as a factor that will probably make family planning acceptable to African families. She says (1986, p. 256),

> "in those developing countries, which have become heavily dependent upon export of manufactures, or remittances by migrants, or capital inputs, the choice between options is narrowing. This situation is likely to force many families to choose fertility control as the means of reducing their expenditure. Some African countries including Ghana, have for a long time suffered from a severe economic crisis, while in others, including Kenya, economic growth has been strong until recently. This may help to explain why use of family-planning services is more widespread in Ghana than in Kenya..".

The crisis hypothesis employs the compelling evidence on recent trends in socioeconomic explanatory variables to contradict some basic propositions of theory in Africa. However this hypothesis is highly speculative. It is based on no evidence of an African country where a sustained fertility decline has begun as a result of economic crisis. Kenya, Zimbabwe and Botswana, the three countries believed to be experiencing some downward shift in fertility are comparatively the most successful economies with the exception of South Africa The examples of Ghana and Kenya cited by Boserup (loc. cit.) are today an embarrassment, if not outright negation of the crisis transition thesis. There is evidence of some decline in Kenyan fertility (Robinson, 1992) whereas no such trend has been reported for Ghana, the more impoverished of the two economies. Similarly, indications of an onset of fertility decline are reported not in the Western or

Central Africa but in the Southern African and more countries of South Africa, Botswana and Zimbabwe. In the specific case of South African,it has been argued by Chimere-Dan (1993) that among blacks, the socio-economic crises of racial domination and apartheid rule did not expedite but rather delayed fertility transition. If and where it occurs in Africa, crisis-led fertility transition is likely to can be temporary, incomplete and potentially reversible.

Notwithstanding its shortcomings, the crisis-led transition hypothesis presents a significant challenge to the established mode of thinking about fertility in Africa. If the expected modernization and socioeconomic development posited by the transition theory as necessary conditions for a decline in African fertility are slow materialize, the 'crisis-led transition" hypothesis suggests a potentially quicker route to achieve rapid fertility in the region.

Towards an explanatory framework

Two possible new directions in fertility research briefly introduced here. The first is to locate fertility in the changing nature of social organization of reproduction in African societies. Political and economic changes at the regional and national levels affect social organization of African reproduction. Some of these effects are time-specific while others translate into processes over time. Some of these changes affect couples more directly than they affect communities, while some of the changes have their maximum impacts on social groups. Overall,

these changes alter the social milieu and social organization of reproduction in African societies. Investigations of the nature and changes in the social organization of reproduction will shed light into social dynamic of fertility and reproductive behaviour. Lesthaeghe (1989) points out specific elements in societal re-organization such as the introduction of cash crops, agricultural expansions, changes in labour organization , expansion of education and westernization that have significant impacts on organization of reproduction in Africa. He correctly points out that African reproductive system shows uneven and diversified adaptations to social, economic and cultural change. These unevenness and diversities should constitute the first target of inquiries in efforts to explain African fertility.
Investigations at this level should address society's adaptive strategy in an ever changing social order. In line with this view, Kraeger (1986) argues for better understanding of demographic regimes or existing social organizations of reproduction which, seen as cultural systems, perform the three tasks of (i) recruiting components of social structure, (ii) offering comparative levers for meaningful institutional analysis, and (iii) being used for self-definition and group identification. In line with this argument, understanding of African fertility behaviour should be predicated in clearly delineated demographic regimes which permit a clear view of how social institutions and structures impinge on groups, and how fertility behaviour is an integral part of society's reaction to the past and adjustment of the present.

One can think of three broad regimes in Africa defined by the

nature and intensity of exogenous influences on the social organization of reproduction. First is the pre- and ancient history for which we have little or no fertility data. From the 16th to about the middle of the 20th century can be characterized as a regime that saw cross-cultural contacts, environmental and technological changes which African social organization of reproduction had to react and adjust to. Many contemporary African societies can be classified into a third regime where more pressure is placed on the social organization of reproduction by state policies favouring a small family and the use of modern contraceptives. In this regime, the response of the African social organization of reproduction should be studied as a case of induced forced social change.

The second potentially fruitful line of inquiry is investigation of African fertility and reproductive patterns as collective behaviour (Bulato and Bos, 1989) within a prevailing reproductive regime. Since collective behaviour is hardly institutionalized, this approach can permit measurement of group behaviour alongside the more common practice of individual-level measurement of fertility.

Criteria for group definition is important. In conventional categorization, group is defined as categories sharing for instance the same socio-economic status, educational level, age and ethnicity. To maximize insight from the orientation suggested here, these categories may be too rigid to maximize the chances of tapping into the dynamics of group behaviour in reproductive behaviour.

This approach however raises the problem of duality in fertility research. Fertility is both an individual and societal affair. A potential problem is again whether the observed fertility pattern is the sum of individual behaviour or whether groups and society at large have fertility and reproductive behaviour that cannot be reduced to the behaviour of individuals in a particular social context. The problem raised here is the debate between psychology and sociology which remains to be resolved by social psychology.

Approaching African fertility and reproductive behaviour from the framework of collective behaviour allows for deeper investigations of outstanding issues in the ideational correlates of fertility dynamics. For instance, Caldwell (1982) contends that the focus of attention should not be education per se but the nature (i.e. curriculum) and content of learning provided in Africa, not just innovative ideas, but specific types new ideas (fertility control; Caldwell and Caldwell, 1987) as fertility determinants.

In summary, after over 30 years of active demographic research on Africa, search for powerful theories to explain African fertility and reproductive behaviour has barely started. Demographic studies of African societies have so far achieved more success in measurement and description than in the explanation of fertility. Common in the literature are the ideas that African fertility is determined by socioeconomic development (Caldwell, 1991), culture (Van de Walle and Omideyi, 1988) or ideational change (Cleland and Hobcraft, 1988). It is suggested here that careful

examination of the nature of social organization of childbearing in clearly defined reproductive regimes which is informed by theories of collective behaviour can advance knowledge of African fertility and reproductive behaviour.

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Table 1. Total fertility rate for four Third World regions

REGION	TOTAL FERTILITY RATE
Sub-Saharan Africa[1]	6.0
Near East & North Africa[2]	4.8
Latin America & Caribbean[3]	4.0
Asia & Pacific[4]	3.5

Notes
These are averages calculated from the most recent fertility data for the countries in each region. With few exceptions these data are from the Demographic and Health Survey results for different countries. The surveys were conducted from 1986 to 1992.

1. 19 countries; Botswana (1988), Burundi (1987), Cameroon (1991), Ghana (1988), Kenya (1989), Liberia (1986), Magi (1987), Namibia (1992), Niger (1992), Nigeria (1990), Senegal (1986), South Africa (1987-89), Sudan (1989-90), Swaziland (1988), Tanzania (1991-92), Togo (1988), Uganda (1988-98), Zambia (1992) and Zimbabwe (1988-89).

2. 6 countries; Egypt (1988-89), Jordan (1990), Morocco (1992), Tunisia (1988), Turkey (1988) and Yemen (1991-92).

3. 15 countries including Belize (1991), Bolivia (1989), Brazil (1986), Colombia (1990), Costa Rica (1986), Dominican Republic (1991), Ecuador (1989), El Salvador (1988), Guatemala (1987), Haiti (1989), Jamica (1989), Mexico (1987), Paraguay (1990), Peru (1991-92) and Trinidad & Tobago (1987).

4. 10 countries: Bangladesh (1991), China (1988), India (1988), Indonesia (1991) Republic of Korea (1988), Pakistan (1990-91), Philippines (1988), Sari Lanka (1987), Thailand (1987) and Vietnam (1988).

Source: Demographic and Health Surveys Newsletter. Vol. 5, No. 2, 1993. macro International Inc. Maryland.

Table 2. Total fertility rates in African countries (1986-1992)

Country	TFR *
Botswana	4.7
Burundi	6.5
Cameroon	5.7
Ghana	6.1
Kenya	6.5
Liberia	6.4
Magadascar	6.0
Malawi	6.7
Magi	6.7
Namibia	5.4
Niger	7.1
Nigeria	5.7
Rwanda	6.0
Senegal	6.2
South Africa	4.6
Sudan	4.6
Tanzania	6.1
Togo	6.1
Uganda	7.2
Zambia	6.3
Zimbabwe	5.3

* Except South African figure, these were calculated using births to women aged 15-44 in the three years before the survey.

Sources: Demographic and Health Surveys Newsletter. Vol. 5, No. 2, 1993. macro International Inc. Maryland; Chimere-Dan (1993).

DEMOGRAPHIC TRANSITION