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**MALE FERTILITY AS A LIFE TIME OF RELATIONSHIPS:
CONTEXTUALIZING MEN'S BIOLOGICAL REPRODUCTION
IN BOTSWANA***

Preliminary paper prepared for a seminar on
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Introduction

It is not sociologically meaningful to talk about the fertility of an individual man without embedding both the man and his children in their nexus of social relationships. This paper illustrates, through contextualization of the fertility history of a man in a village in Botswana, how reproduction or fertility is one aspect of a changing pattern of relationships a man has over his life course.

Five features of men's connections to their children make it essential to consider male fertility as an aspect of a life time of changing relationships¹. These features are as follows: 1) men can, and do, have children and become fathers over a long period of their lives, and becoming a father to a new child has different meanings and implications at different ages; 2) men continue to be in relationships with their children as those children age, and the meaning of fertility alters with the age of a child and the distribution of ages of children; 3) men become fathers through other mechanisms besides biological reproduction; 4) men share their relationship to their children with other people; and 5) men share in the relationship that other men have with their children.

The salience of these features differs from context to context. They are most obviously important in high fertility societies where kinship is a significant principle of social organization so that individuals' reproductive spans are long and relationships are multiplex. However, aspects of contemporary low fertility regimes, for instance divorce and remarriage, step-parenthood, extramarital fertility, grand-parental care for children, adoption, and technologically-assisted births, bring into question the taken for granted identification of biological and social paternity, and make necessary a truly sociologically informed approach to fertility (Townsend n.d.).

Fertility seen as a social relationship with children is very different from biological fertility defined, for instance, as inseminations carried to term. For women, adoption, infanticide, and abandonment disrupt the simple mapping of maternity onto biological fertility. For men the connection is even more contingent. Genetic relationships between men and children observed and recorded by social scientists must always be qualified as 'reported,' 'alleged,' or 'putative,' and reflect as much the ethnobiology of the people being observed as they do the facts of biology. Leach has remarked that: 'Marriage and mating are as different as chalk from cheese. You cannot deduce the practices of the first from the problems of the second' (Leach 1991:108). This paper makes the same argument for the outcomes of mating and marriage: the practices of social reproduction cannot be deduced from the mechanisms of biological fertility. The obvious connection between

biological and social reproduction, that ultimately neither can proceed without the other, in no way determines a direction of causality or undermines the case for independent analysis of the two processes.

As social anthropologists, we are interested in the processes of social reproduction, and it is with these processes also that as demographers we are concerned when we extend our interest beyond the accounting models of formal demography to take account of the causes and consequences of fertility rates and levels. When demographic models of fertility (Birdsall et al. 1985; Freedman et al. 1983) include 'fertility' as a feedback or independent variable in explanations of fertility, they are in fact defining fertility as an acknowledged or socially defined fertility. Whether the unit of analysis is an individual, a couple, a household, or any other fertility relevant group, the appropriate measure of cumulated family size or current number of children is one that recognizes that family size and number of children is a perception that human beings have of their social relationships rather than of their biology. This is particularly true for men for whom the benefits of children derive only from those children on whom they have acknowledged claims, and for whom the costs of children apply only to those children who can make claims upon them. Neither group of children is defined simply by the man's biological reproduction. It is for this reason that 'male fertility' must, from both anthropological and demographic points of view, be considered as an aspect of social position in general.

In a high fertility regime, women bear children over a number of years and are, because of this, mothers of children of any specific age for extended periods². One important consequence of fertility decline is the diminution of the amount of people's lives that they spend actively procreating or parenting children of any specific age³. In any known or realized demographic regime, men's procreation is at least potentially spread over a longer period than women's, so that men may sire children over extended portions of their life courses⁴. To consider men's fertility over the life course, as a life time of responsibility, is to acknowledge two important dimensions of variability in what it means, for both men and children, to be a father. One dimension is provided by the changing age of the man: to become a father as a young man is different from becoming a father as an older man because men's social situation and economic position change over their life course. The second dimension, which interacts with the first, is the age of the child: to be the father of an infant is different from being the father of an adolescent.

Background

The examples in this paper were gathered during eleven months of fieldwork concentrated on a village of five and a half thousand people located about forty kilometers west of Botswana's capital city of Gaborone. The village has primary and junior secondary schools, a clinic, several shops, and piped water to eighteen communal faucets. There is no telephone or electric service in the village, though power lines were being extended to the schools and other public sites in 1994. In 1991, the village was linked to the capital city of Gaborone by tared road, and access to urban employment, services, and supplies was made much easier. The villagers maintain cattle and flocks of goats, but crops from arable farming have been minimal recently because of drought. Economically, the community has depended for decades on income from migrant labor. At an earlier period this was almost exclusively migrant labor of men in the mines of South Africa, but since independence in 1966 the rapid growth of the capital has provided employment opportunities in Botswana for many men and women from the village.

According to the 1981 census, only 41 per cent of women in their twenties, and 53 per cent of women aged 25 to 29 have ever been married (Botswana Government 1983: table 24). On the other hand, 83.4 per cent of women in their twenties, and 88 per cent of women aged 25 to 29 have born at least one child (Botswana Government 1983: table 23). Three-quarters of all households were rural. Forty-eight percent of rural households, and 56 per cent of rural households with a household head less than age 45, were headed by women (Botswana Government 1983: table 39). Female-headed households generally have less access than male-headed households to both male labor and family labor (Fortmann 1981) and to cattle (Kossoudji and Mueller 1983), the resources needed for subsistence agriculture. Female household heads are also less likely than male heads to have income from employment or self-employment--56 per cent of female household heads are 'economically non-active' (Botswana Government 1983: table 38).

These figures have some descriptive value, but they incorporate an imported set of definitions (Awusabo-Asare 1988; Riedmann 1993) and distort the complex reality of family life in Botswana. In particular, they do not take into account the processual nature of traditional Tswana marriage (Comaroff and Comaroff 1981; Schapera 1950) nor the multiple residences of most Tswana and the connections between residential households (Kerven 1982, 1984; Peters 1983; Townsend and Garey 1994).

Among the Tswana, customary marriage is an arrangement between families; marriages tie families progressively closer through ceremony, negotiation, exchange,

and obligation (Schapera 1950, 1971; Comaroff and Comaroff 1981). Marriage is a process rather than a single event, and does not necessarily involve the establishing of a separate household or even co-residence between husband and wife. A primary function of marriage, however, is to provide a social position for children. A Tswana man can claim his wife's children as his legitimate heirs only after he has made a payment of bridewealth cattle (*bogadi*) to her family, something he may wait to do until the children are grown or which he may not do at all.⁵

There is no provision in the traditional culture or in tribal law for men to directly support their biological children outside marriage (Molokomme 1991). The customary pattern is that if a young woman becomes pregnant, the man whom she names as father is under an obligation to initiate marriage arrangements or to pay compensation in the form of cattle to the woman's parents. The one-time payment concludes his, and his family's, obligation. The child's social position and family membership remain with the mother's family and lineage, and the cattle paid by the father provide both symbolic and material guarantees of the child's rights.

The residential household, while it is enshrined in the methodology of censuses and social surveys, is a category that frequently distorts the social reality of non-western societies (Bruce and Lloyd 1992). In Botswana, the customary pattern is for each 'household' to have three residences--in the village, at the agricultural lands, and at the cattle grazing areas. Each residence would be occupied, at different seasons, by different groups of household members. This pattern persists, and is now complicated by the residential requirements for education and wage labor. Men, and young men in particular, are very likely to be away from the village at the cattle posts or at work in the towns. Many women also leave the village for various lengths of time to work. Whole households still move from village to the lands at the start of the rainy season in November, but children frequently stay in the village with relatives during the school week. The result of these sex and age specific movements is that at any given time many residential units are only partial social units, and the cross-sectional snapshot of a survey observation catches many fragmentary and temporary arrangements.

A Tswana man's fertility

Mowetsi Motlamedi⁶ is, in 1993, a vital man of fifty-eight, involved in the discussions and negotiations which make up the political and jural life of the village, acting as head of his *lolwapa*⁷ (household) and frequently as spokesman for his ward, and attempting to coordinate the lives of his children, as well as working at a government warehouse in the capital, a job to which he commutes daily. Residing with his wife, two of his younger sons, and two of his younger

daughter's children in his own household, he presents a picture of the male position in which economic support and coresidence with children coincide in a male-headed nuclear family. However, just as a developmental or processual view of the family or domestic group reveals family types as stages (Goody 1958), so a life course perspective on male fertility reveals a changing pattern of relationships and responsibilities. Mowetsi Motlamedi's fertility has been meshed in the other aspects of his life course and has overlapped with the fertility of both ascending and descending generations.

The youngest of nine children (seven of whom survived into adulthood) he attended primary school for five years; at the age of eighteen, he became a migrant worker in the mines of South Africa. His five years of formal schooling was the only schooling for any of the male children of his family and was an example of a common pattern, repeated for his own sons, of more years of schooling for younger sons. Because sibling order correlates with the economic position of the parents, with the composition of the domestic group, and with the demand and supply of labour in the family, education and birth order are frequently connected. The father's fertility does not reproduce interchangeable children, but rather a sequence of social beings whose life chances and circumstances differ markedly.

Of Mowetsi's four older brothers, one had died before establishing his own *lolwapa*, one had married a woman from South Africa, had established his home in the capital and had then moved to South Africa with his wife and children, and two had established their own *malwapa* adjoining their parents' compound. The parents have died and their compound is now occupied by Mowetsi, the youngest sibling. The creation of a cooperating band of brothers was the ideal of traditional Tswana men, though the centrifugal forces of competition also operated, and the row of compounds occupied by the three brothers, now extended at both ends by *malwapa* established by the next generation, was a central feature of the physical and social neighborhood. The group of kin in these adjacent compounds visited back and forth constantly and cooperated on a variety of tasks, while the children formed a large care and play group.

Since Mowetsi was the youngest, he was in line to take over his parents' *lolwapa* on their death, but this succession did not take place until he was fifty-two, twelve years after the birth of his youngest child, and three years after the birth of his first grandchild. His current position as head of his parental *lolwapa* and economic support of his co-resident wife and children is a stage, and a late stage at that, of his fertility career.

Mowetsi's departure for the mines preceded by only one year the birth of his first child. At nineteen, he was young to be father of an acknowledged child. In 1993, only two of thirty-four men in the ward aged between twenty and thirty had acknowledged children. In 1973, for men whose life histories I knew, the figure had been one of ten. Mowetsi was not unusual, however, in his domestic arrangements after the child's birth. No man under forty lived in his own home in the village with his own children in either 1993 or 1973 (Townsend and Garey 1994), and Mowetsi's life followed this pattern as the mother of his child continued to live in her parent's *lolwapa* while he continued to work at the mines. The couple were married in 1957, which was the year of the birth of their second child, when Mowetsi was twenty-two and his wife was eighteen. Over the next eighteen years, they had five more children, and his wife had three pregnancies which ended in miscarriage, still birth, or infant death. During this entire period, Mowetsi continued to work at the mines in South Africa, away from the village for months at a time, and his wife continued to live with her parents. In 1977, after twenty-four years as a miner and aged forty-two, Mowetsi left the mines and returned to live full-time in Botswana. His own parents were still alive, and he lived in the compound of his wife's parents for ten years while working in the capital.

Mowetsi's fertility in a narrow sense can be seen as unproblematic: he fathered seven surviving children over a period of twenty-one years⁸. Seen as the support of children, however, his fatherhood is more widely and complexly distributed, for his earnings have gone to the support of his parents' household and, for most of his adult life, to the support of the household of his wife's parents -- a household which included other children besides his own. Mowetsi's fertility as fathering is also complex, for he has been a physically absent father for twenty-three years of his oldest child's life but only for two years of his youngest child's life. He is now the male head of household for two young grandchildren whose parents do not live with them, as well as for his own two youngest children.

Social relationships, as well as individuals, are reproduced, and a discussion of Mowetsi's fertility is incomplete if it stops with the births, or even with the support histories, of his children. Because Mowetsi was the youngest of his parents' children, he was not involved in the support of his siblings. His contribution was more to the welfare of the members of the household of his parents-in-law, including but not limited to his own children. However, his children illustrate a common Tswana pattern of distribution of costs between siblings. In summary, their arrangements are as follows:

1) Daughter (born 1954). She had six years of elementary school. She is married and living with her husband in their own *lolwapa* in his village with their one son

(born 1984). She is responsible for the education costs of the sixth-born (born 1973) of her siblings, who lives with her parents.

2) Son (born 1957). No schooling. He works in construction and carpentry in the capital, where he lives with his wife in their own home. His only child (born 1988) lives with his wife's parents in another village. He is responsible for the costs of his fifth-born (born 1970) sibling, a brother who was given as a child to his mother's brother to work as a herdboys and is now living with his parents and attending elementary school.

3) Son (born 1963). No schooling. He works in the mines in South Africa. In 1993 he married a woman from the village with whom he has had one son (born 1989). His wife lives with her parents and his child is a frequent visitor to the compound of Mowetsi and his wife. His salary has been devoted to accumulation of *bogadi* (bridewealth) and he is not currently responsible for any of his siblings.

4) Daughter (born 1967). She was schooled through Form 3 of secondary school and works in an insurance office in the capital, where she lives with her husband who is a government driver. They own a house in the capital, but their two daughters (born 1988 and 1992) live with Mowetsi and his wife. Mowetsi's daughter had come to stay at her parent's house to deliver the children and to spend her period of post-partum seclusion in her mother's care. She and her husband are building a house in the village to which she plans to move with her children and with her husband's younger brother (born 1981) for whom he is responsible, and her own youngest brother (born 1975) who is currently a boarder at secondary school, and whose educational expenses she pays.

5) Son (born 1970). This son, aged twenty-three, is in standard seven in the non-formal school in the village, where his expenses are paid by his eldest brother (Mowetsi's second born child). He lives with his father and mother, one sibling, and two of his sister's young children. When he was a child, he had been given to his *malome*, his mother's brother, as a herdboys for his cattle, so had not been sent to school. It is only because he has older siblings who are able to assist him, and because he is a young man with a certain quiet determination, that he is able to get any education and has not so far followed his older brothers into unskilled manual occupations.

6) Son (born 1973). He is in form 2, the second year of secondary education, and the highest level at the junior secondary school in the village. His educational expenses are met by his oldest sister but he lives with his mother and father.

7) Son (born 1975). He is a boarder at the senior secondary school in a town about twenty kilometres away, where he is in form three. He returns to his parents' home during holidays but will, when the sister who pays for his schooling establishes a home in the village, live with her, her husband, her husband's younger brother, and her two young children.

Fertility and social relationships

A man's position in a network of social relationships has implications for his fertility by giving him claims on children, by providing others with the position from which to make claims on him, and by providing more or less clearly defined social positions and living situations for his children. In the Tswana social system I am describing, males of three generations have relationships with a man and his children which serve to distribute the costs and benefits of fertility and paternity as well as the other elements of the paternal role. This distribution has implications for fertility because it helps determine where children will be placed socially, that is, whose children they are, as well as who will pay for them, who will care for them, and who will benefit from them.

Mother's brother, wife's sister

The relationship between Mowetsi and his wife's brother is an important factor in considering his fertility history. A man's wife's brother, usually referred to in both the anthropological literature and by the people concerned from the child's point of view as a maternal uncle or mother's brother, occupies a crucial social position as a link between the lineages or extended families of husband and wife. His social-structural importance is made clear in Tswana practice through his centrality at times of marriage. The *malome* is a key figure in the discussions and negotiations which lead up to marriage, he is expected to contribute to his sister's son's *bogadi*, and he has a claim to a portion of the *bogadi* paid at the marriage of his sister's daughter. He is also expected to contribute to the round of meals which accompany weddings, and it was he who led the men of Mowetsi's ward across the village when they took the *bogadi* to the family of Mowetsi's second-born son's wife on the occasion of their marriage.

In a patrilineal society such as the Tswana, the mother's brother does not have the key role in the inheritance of his sister's children that he would have in a matrilineal system, but in both cases he takes on aspects of what is frequently thought of as the 'paternal role'. In the normative western nuclear family, succession, inheritance, coresidence, economic support, nurturance, emotional closeness, and marriage to the mother are all bundled into a single relationship. In this case fatherhood and fertility are seen as identical, but this identity is contingent

rather than necessary. When the elements of the 'paternal role' are distributed among different people, then so too are the costs and benefits, the motivations for and implications of, fertility. If men know that they have access to the labour of children and younger people through other mechanisms besides biological reproduction, then their fertility strategies will take this knowledge into account.

In Mowetsi's case, his wife's brother had been able to get access to Mowetsi's son's herding labour. The wife's brother's own domestic economy had not depended on an uninterrupted mobilization of his own children's labour. In addition, when the wife's brother had been at the mines and his wife had been living in her native village, one of his children had been the direct responsibility of his sister (Mowetsi's wife), while she had still been living at her parents' home. These two relatively formalized, but temporary, transfers of children are distinguished from permanent 'giving' of children to be raised by another, for instance by an aunt or grandmother, and from the constant daily flux of child movement in accord with the schedules, resources, educational needs, labour requirements, and personal preferences of adults and children which is so conspicuous a feature of Tswana family life⁹.

The relationship of a child and his or her maternal uncle is however, more than a way to appropriate labour. The ritual and social-structural elements of the relationship coincide with the potential for emotional closeness. Frequently the child has shared a *lolwapa* with his or her *malome* when the uncle and his sister are still living in their parent's home, he not coresident with his wife and children, she and her children not co-resident with their father. The uncle, attached to his sister by enduring bonds of sentiment and interest, may well be a more stable figure in a child's life than the father (Fox 1993). For men, a sister's children are people with lifetime connections and mutual claims.

Grandfather

All of Mowetsi's children were born into a *lolwapa* headed by their maternal grandfather and spent the first two to twenty years of their lives there. Mowetsi's own daughters bore their children at his home, and his younger daughter's children live with him. I did not come across any first born children in the village who were not born into the house of their mother's parents. For married women, the mean duration from first birth to the time she moves to her own household is twelve years, so children born in the twelve years after their mother's first birth are, on average, born into their grandparents' household¹⁰. Women who do not eventually marry in general bear all their children in their parents' home. In these cases, it is usually through the grandfather as head of the *lolwapa* that children

become members of the ward or lineage and acquire their rights to land, jural standing, and social position.

Sometimes the grandfather becomes not only the social father in this restricted sense, but the father more generally. 'We call him father because he raised us,' was the explanation given by a set of siblings in this situation after a particularly confusing genealogical interview in which mother and children all gave the same name when asked about their father. Grandpaternal claims of paternity are not simply a matter of default. Mowetsi's brother Motsoko, an old man and head of his own *lolwapa* who lived with, among other people, his unmarried daughter and three of her children, explained to me his view of the children's situation. Even though the biological father of his daughter's children contributed to their support, those children had been given a 'surname' from their mother's paternal lineage and, Motsoko said, 'belonged to' him, as their mother's father¹¹. In general grandfathers would rather their grandchildren be firmly situated in their homes and lineages than ambiguously associated with the biological father (Garey and Townsend 1995).

Siblings

Tswana adults were very clear not only about the new and increased costs of many children in an increasingly commercial economy, but also about their benefits. We were told frequently that, since one could not depend with certainty on any one child, and could never know which ones would turn out to be good to you, it made sense to have many. But there is also an interaction between the benefit parents derive from children and the benefits that siblings derive from each other. Care of children by their siblings may most easily be seen as a benefit to parents (particularly mothers), and a reduction in the costs of fertility. But the presence of siblings has profound implications for a child's life chances and adult possibilities as well. For example, the sharing of child care and child labour between adult siblings, by reducing their dependence on biological reproduction, has implications for their fertility behaviour.

It is, perhaps, in the provision of education that siblings have the greatest impact on each other's life chances. I have discussed the pattern in Mowetsi's family for the younger brothers to get the most schooling. This pattern holds over generations in the village as a whole, at the same time as general levels of schooling have risen rapidly. Older siblings often help pay for the schooling of the younger. In the process they reduce what might have been seen as costs to parents. At the same time, however, they make claims of their own on the siblings they educate. In particular, those siblings will be expected to contribute to the care and

education of the children whose parents helped them¹². The implications of the pattern would appear to be pronatalist in two generations simultaneously.

Implications for the study of male fertility

There are two broad methodological implications of this example. The first is that male fertility is spread over the life course and is particularly vulnerable to mis-representation by analyses based on cross-sectional snapshots. Especially when marriage is a process and does not precede child-bearing, a young man's fertility may be acknowledged and reported according to a variety of social rules or conventions. The reported number is not a reliable indicator of either biological reproduction or social responsibility, and the lack of marriage between a man and woman is, in itself, not a good indicator of the social relationships that will eventually be worked out. In addition, a man's knowledge that he is engaged in a lifetime activity will colour the tempo and volume of his fertility.

The second methodological implication is that the fertility of individual men cannot be studied in isolation, but must be embedded in a set of social relations. It is not that a group is acting or making decisions as a corporate group, though that may happen in some circumstances, but that each man coordinates his fertility career with others, which provide a context for his own actions. The age at which a man marries, establishes his own household, or appears to women as a desirable husband or partner, may depend on the relationship status of his sisters (and hence on the situation of their male partners), on the needs and resources of his brothers, or on the situation of his father. Identifying a fertility relevant group, a context that does not ramify endlessly or idiosyncratically but yet captures the significant relationships, is a difficult and situation-specific task. In rural Botswana, the *lolwapa* of origin, with members resident in a number of locations, makes a useful first approximation to a fertility relevant context, especially for men. Women who marry change social position, becoming members of their husband's *lolwapa* and ward. Men, on the other hand, though they may start a *lolwapa* of their own, remain linked to the patrilineage and to the *lolwapa* of their parents. However the context of fertility behaviour is defined, and whatever its limitations, the point remains that a man's fertility cannot be understood in isolation, and that, for many types of analysis, research subjects should be linked rather than independent.

Besides these two methodological implications, there are two sorts of substantive implications for the relationship between fertility levels and systems of coordinated fertility histories. The first sort of implication comes most clearly into focus when we consider what impact lower fertility has on the social system, the

second when we consider what implications the system itself has for fertility levels.

The effect of an 'exogenous' decline in fertility in the system I have described in Botswana would be most evident in the coordination or relation between generations. For example, men who have relatively few children, and whose children are close together in age and, on average, thirty years younger than their father, will not have young children of their own when they are elderly. They will not have a range of differently situated children to turn to and will not be able to distribute the costs of their youngest children among their older ones. The resources available to these men's children, in fact, will be much less variable within sibling sets, and will be restricted to the resources under the control of parents during a relatively brief portion of their lives. Further, the parents will not be as likely as now to have their younger children living with them when their grandchildren are born, so their current position as natural or default second homes for grandchildren will be less sustainable. At two levels, therefore, through links between siblings and between grandparents and grandchildren, the social bonds connecting parents and children will be weakened. The immediate implications for older people are not good, though they will undoubtedly mobilize the resources they control and press the claims they do have to maintain connections with their adult children. One general implication of lower fertility within the system I have described will be greater homogenization of social situation within sibling sets, and greater inequality between sibling sets. This growing inequality driven by micro-level demographic processes will exacerbate the growing inequality within the country resulting from macro-economic policies (Curry 1987; Love 1994).

This consideration of the implications of fertility decline makes, of course, an untenable *ceteris paribus* assumption that other changes are not also occurring. In a situation like Botswana, where change is pervasive, rapid, and constant, this assumption is particularly misleading. In conclusion, I will turn from the impact of exogenous fertility decline to the dynamics of the system of linked fertility careers that I have described.

In the system I have described, partly because control of physical and social resources in the village is in the hands of older men, and partly because social and emotional links between siblings are culturally reinforced, the income and production of adult males is, at least in part, appropriated for the support of children. Children do not depend exclusively on the production of their parents, and in a situation of agricultural uncertainty and high unemployment that is just as well. The system, however, depends on a division of labour in which no individual can survive without mobilizing social relationships at every step. This division of

labour is undermined when people can earn individual incomes within the country. Migrant labour, while it provided individual incomes, did not undermine the system because the migrant depended, for his material well being and social existence, on maintaining his position in the village.

Change in the social structure of rural Botswana will proceed simultaneously with changes in fertility levels. The challenge for people there, as it is globally whether fertility is high or low, is in channelling the results of male labour to children. One of the important lessons of the system I have described is that this channelling of resources does not have to proceed exclusively from men to their own biological children, and further, that a generalized connection between men and children is in the best interests of all.

Notes

1. Since this is a seminar on 'Male fertility' my argument and examples are about men. I would contend, however, that the asymmetries between male and female fertility or parenthood are frequently over-emphasized and that the essence of my argument applies to women as well as to men.
2. It is necessary to limit the definition of motherhood in this way since any woman is a mother from the time of her first surviving and acknowledged birth until her death or the death of her last surviving child. Consider two women, both of whom have their first child at age twenty, and all of whose children survive them. One woman has only one child, the other has ten children at two year intervals. The first woman is mother of a two-year-old for one year only, the other for ten years. The first woman is mother of a child under age five for five years, the second for twenty-three years.
3. This is not necessarily the case, but it is generally true that declines in fertility have been accompanied by compression of reproduction into a few years. Combined with improvements in mortality, this compression means that both men and women are parents to children of any given age for a much smaller portion of their lives than under a high fertility regime. Remarriage for one or both spouses, when it is accompanied by the birth of children in more than one marriage, works against this trend and extends the number of years, and amount of a life, spent parenting.
4. It is possible to imagine or model a population in which men procreate only at some particular age x , so that every child is exactly x years younger than its father, men have several children each, all of the same age, no child (except in the case of multiple births) has a full sibling, etc. Such mental exercises may define the limits of the possible, and introduce a qualification into generalizations, but they have no relevance to real social arrangements. Restrictions on sexual activity, marriage rules, and social arrangements more generally confine the range of men's procreation to only a portion of the theoretical possibilities.
5. The meanings and functions of bridewealth and of African marriage are complicated, varied, and have changed over time (Kuper 1982; and the essays in Comaroff 1980 and Krige and Comaroff 1981). In different villages, and according to different villagers, the number of cattle, the timing of the payment, and whether payment was essential, all vary. In the particular community of our study, payment of the six cattle of *bogadi* was not needed for the children of a marriage to be considered members of the father's lineage, but payment of the single *serufo* cow was required.

6. Both are fictitious names, and neither is the name of any Motswana that I know of. Mowetsi, 'one who finishes something', is, however, appropriate for a last born. Motlamedi means 'one who cares for others'.

7. A *lolwapa* (plural *malwapa*) is both a physical space, a compound containing dwelling huts, a courtyard, cooking areas, storage and work spaces, etc., and a socially recognized unit. A person may be a member of a *lolwapa* but not resident in it, for instance when he or she lives and works in the capital. Not all residents in the *lolwapa* as compound are necessarily members of the *lolwapa* as social group or extended family.

8. I am assuming, in this discussion, that Mowetsi is the biological father of all the children born by his wife, all of whom are presented and claimed as his children. I am also assuming that he has not fathered any other biological children. If he has they are not acknowledged as his social children. Both of these assumptions are questionable. One could be proved or at least verified with serum tests, the other is impossible to establish. That observation of male fertility must almost always be restricted to acknowledged fertility is a strong argument for treating male fertility as a social relationship.

9. I am indebted to Anita Garey, who conducted fieldwork on childcare arrangements in the village in collaboration with my own research there, for sharing with me her data, which confirms my assertion here.

10. For twenty-six married women between the ages of thirty-three and sixty-five who had established their own households with their husbands, the mean time from first birth to setting up their own household was 12.08 years and the median time was 11.5 years (Garey and Townsend 1994).

11. The Tswana naming convention is to give a boy one of his grandfather's names. The imposition of a system of first names and surnames has stopped the alternating generational pattern at the generational level of today's older grandfathers. Mowetsi's children and his sons' children had one of his father's names as a surname. Mowetsi's brother's children, his sons' children, and his unmarried daughter's children had Mowetsi's fathers' other name as surname.

12. Economic and social changes which reduce the likelihood and stability of marriages increase the importance of brothers as supports of their sisters' children. This development has also been noted in areas of South Africa dependent on migrant labour (Niehaus 1994; Sharp and Spiegel 1990).

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