

POPULATION DYNAMICS OF SUB-SAHARAN AFRICA

PN-ABCQ-206

**SOCIAL
DYNAMICS
OF ADOLESCENT
FERTILITY
IN SUB-SAHARAN
AFRICA**

NATIONAL RESEARCH COUNCIL

POPULATION DYNAMICS OF SUB-SAHARAN AFRICA

**DEMOGRAPHIC CHANGE
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IN SUB-SAHARAN AFRICA**

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**SOCIAL DYNAMICS OF ADOLESCENT FERTILITY
IN SUB-SAHARAN AFRICA**



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**SOCIAL DYNAMICS
OF ADOLESCENT FERTILITY
IN SUB-SAHARAN AFRICA**

• • • • •

Caroline H. Bledsoe and Barney Cohen, Editors

Working Group on the Social Dynamics of
Adolescent Fertility

Panel on the Population Dynamics of Sub-Saharan Africa

Committee on Population

Commission on Behavioral and Social Sciences and Education

National Research Council

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Errata

Page 28: Table 2-9 should read as follows:

TABLE 2-9 Percentage of All Respondents Aged 20 and Older Who Have Given Birth Before Age 20, Selected Sub-Saharan African Countries

Country	Age at Time of Survey			
	20-24	25-29	30-34	35-39
Botswana	55	61	60	57
Burundi	27	37	36	38
Ghana	51	50	58	56
Kenya	58	67	70	67
Liberia	64	62	55	52
Mali	67	61	64	59
Nigeria	54	54	57	49
Senegal	59	61	60	61
Togo	56	58	64	55
Uganda	68	68	72	73
Zimbabwe	49	58	59	53

SOURCE: Demographic and Health Surveys Standard Recode Files, weighted data.

Page 99: Table 5-3 should read as follows:

TABLE 5-3 Level of Formal Education Attained, Women Aged 15-19 and 20-24, Selected Sub-Saharan African Countries: Percentage in Age Group

Country	Primary or Higher		Secondary or Higher	
	15-19	20-24	15-19	20-24
Botswana	95	85	38	35
Burundi	27	22	1	3
Ghana	81	69	7	10
Kenya	95	92	21	35
Liberia	63	52	22	31
Mali	24	18	0	2
Nigeria	66	58	34	31
Senegal	32	29	14	11
Togo	62	55	16	18
Uganda	79	70	12	14
Zimbabwe	98	93	50	51

SOURCE: Demographic and Health Surveys Standard Recode Files, weighted data.

Page 105: Table 5-7 should read as follows:

TABLE 5-7 Knowledge of Fecund Period and Ever-Use of Modern Contraception by Education and Weekly Listening: Percentage of Women Aged 15-24

Characteristic and Country	Level of Education			Listens to Radio	
	None	Primary	Secondary and Higher	Yes	No
Knowledge of Fecund Period					
Botswana	1	3	7	5	2
Burundi	11	14	64	18	10
Ghana	15	23	41	27	19
Kenya	11	19	31	23	17
Liberia	3	4	11	7	3
Mali	10	20	^a	16	8
Senegal	3	12	36	10	6
Togo	10	33	58	40	21
Uganda	5	9	24	13	8
Zimbabwe	2	4	10	n.a.	n.a.
Ever-Use of Modern Contraception					
Botswana	27	37	54	45	30
Burundi	0	2	11	2	1
Ghana	6	14	26	17	10
Kenya	4	10	19	14	7
Liberia	4	11	45	21	8
Mali	1	10	^a	6	1
Senegal	1	6	11	4	2
Togo	4	11	22	17	7
Uganda	1	4	20	9	3
Zimbabwe	46	33	27	n.a.	n.a.

NOTE: n.a. = not available.

^aFewer than 25 cases.

SOURCE: Demographic and Health Surveys Standard Recode Files, weighted data.

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Preface

This report is one in a series of studies that have been carried out under the auspices of the Panel on the Population Dynamics of Sub-Saharan Africa of the National Research Council's Committee on Population. The Research Council has a long history of examining population issues in developing countries. In 1971 it issued the report *Rapid Population Growth: Consequences and Policy Implications*. In 1977, the predecessor Committee on Population and Demography began a major study of levels and trends of fertility and mortality in the developing world that resulted in 13 country reports and 6 reports on demographic methods. Then, in the early 1980s, it undertook a study of the determinants of fertility in the developing world, which resulted in 10 reports. In the mid- and late-1980s, the Committee on Population assessed the economic consequences of population growth and the health consequences of contraceptive use and controlled fertility, among many other activities.

No publication on the demography of sub-Saharan Africa emerged from the early work of the committee, largely because of the paucity of data and the poor quality of what was available. However, censuses, ethnographic studies, and surveys of recent years, such as those under the auspices of the World Fertility Survey and the Demographic and Health Survey programs, have made available data on the demography of sub-Saharan Africa. The data collection has no doubt been stimulated by the increasing interest of both scholars and policymakers in the demographic development of Africa and the relations between demographic change and socioeconomic develop-

ments. In response to this interest, the Committee on Population held a meeting in 1989 to ascertain the feasibility and desirability of a major study of the demography of Africa, and decided to set up a Panel on the Population Dynamics of Sub-Saharan Africa.

The panel, which is chaired by Kenneth Hill and includes members from Africa, Europe, and the United States, met for the first time in February 1990 in Washington, D.C. At that meeting the panel decided to set up six working groups, composed of its own members and other experts on the demography of Africa, to carry out specific studies. Four working groups focused on cross-national studies of substantive issues: the social dynamics of adolescent fertility, factors affecting contraceptive use, the effects on mortality of child survival and general health programs, and the demographic effects of economic reversals. The two other working groups were charged with in-depth studies of Kenya and Senegal, with the objective of studying linkages between demographic variables and between those variables and socioeconomic changes. The panel also decided to commission papers reviewing levels and trends of fertility, the proximate determinants of fertility, nuptiality, child mortality, adult mortality, internal migration, and international migration, as well as the demographic consequences of the AIDS epidemic.

This report, one of the four cross-national studies, is concerned with the social dynamics of adolescent fertility in sub-Saharan Africa. It uses data from recent national surveys, conducted under the auspices of the Demographic and Health Surveys (DHS), to examine, among other things, contemporary trends in marriage, sexuality, contraceptive use, and fertility. It describes in some depth the changing social context within which adolescents are having children in sub-Saharan Africa, and the effects of these changing circumstances on the benefits and risks of early childbearing. The report draws extensively on ethnographic and historical literature to demonstrate the enormous heterogeneity in economic and social regimes within sub-Saharan Africa. This heterogeneity is used to explain why adolescent fertility has very different meanings and outcomes for different groups.

This report results from the joint efforts of the working group members and staff and represents a consensus of the members' views on the issues addressed. The Committee on Population and the Panel on the Population Dynamics of Sub-Saharan Africa appreciate the time and energy that all the working group members devoted to the study. Caroline H. Bledsoe wrote the first drafts of Chapters 1 and 8, and she and Barney Cohen served as the principal editors and coordinators for the manuscript. Andrew J. Cherlin and Dominique Meekers collaborated on the first draft of Chapter 2, and Anastasia Gage-Brandon wrote the first draft of Chapter 3. Jane I. Guyer wrote the first draft of Chapters 4 and 6. Dominique Meekers wrote, and Daniel M. Sala-Diakanda contributed to, the first draft of Chapter 5. Barney

Cohen wrote the first draft of Chapter 7, relying heavily on a commissioned paper by Laurie Zabin and Karungari Kiragu. As noted above, however, this report represents the views of the group as a whole, and considerable effort by all the members and staff went into the refinement of the early drafts.

The working group would like to acknowledge the help of Katherine Abu, A.A. Adejo, Aderanti Adepoju, Odette Ba, Gary Barker, Ann Blanc, Reed Boland, Judith Bruce, Kabir Cham, Gracia Clark, Francine Coeytaux, Sidiki Coulibaly, Allan Ferguson, Karen Foote, Christina Fowler, Samantha Garbers, Adrienne Germaine, Muhiuddin Haider, Karen Tranberg Hansen, Sarah Harbison, Kenneth Hill, Nikki Jones, Karungari Kiragu, Anke Kleiner-Bossaller, Mary Kay Larson, V.K. Lema, Thérèse Locoh, Carolyn Makinson, Linda G. Martin, Dominique Meekers, Asha Moḥamud, Leo Morris, Pierre Ngom, Wangui Njau, Mojisola Olaneyan, John Paxman, Sam Preston, Paul Richards, K.O. Rogo, Harshadkumar C. Sanghvi, Krista Stewart, John M. Whiting, Nancy Williamson, and Laurie Zabin.

As is the case for all of the panel's work, this report would not have been possible without the cooperation and assistance of the Demographic and Health Surveys Program of the Institute for Resource Development/Macro Systems. We are grateful to the DHS staff for responding to our inquiries and facilitating our early access to the survey data.

We are also most grateful to the organizations that provided financial support for the work of the Africa panel: the Office of Population and the Africa Bureau of the Agency for International Development, the Andrew W. Mellon Foundation, the William and Flora Hewlett Foundation, and the Rockefeller Foundation. Besides providing funding, the representatives of these organizations were a source of information and advice in the development of the panel's overall work plan.

Special thanks are also due to Joan Montgomery Halford and Paula J. Melville for providing superb administrative and logistical support to the working group, to Mendelle T. Berenson and Florence Poillon for skillful editing of the report, to Elaine McGarraugh for meticulous production assistance, and to Eugenia Grohman for valuable guidance and extraordinary patience through the review and production processes.

SAMUEL H. PRESTON, *Chair*
Committee on Population

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Executive Summary

This report stems from concerns that adolescent childbearing in sub-Saharan Africa (hereafter, Africa) may be increasing. High fertility among adolescent women in this part of the world is nothing new. A large percentage of all African births have long been those to adolescents, and most adolescent childbearing in Africa is perceived to be not only quite normal but highly desired.

Yet, in parts of Africa, the social context of early childbearing is changing dramatically. In the past, young women tended to move directly from childhood to adult responsibilities. Now, according to some evidence, the once brief interlude between childhood and adulthood is lengthening. Menarche may be declining in a few areas, while schooling and other forms of training are delaying marriage. In particular, where girls find opportunities for education they seek to prolong their school careers, a goal that most national policies as well as family elders declare incompatible with motherhood.

The most significant change in sub-Saharan Africa is not a rise in overall rates of adolescent fertility but in childbearing among women who do not appear to be married. The report builds on the fact that many of the problems that are associated with adolescent fertility in Africa—problems such as school dropout and abortion—appear to stem not from adolescent childbearing itself, but from condemnation of childbearing under conditions society disapproves.

Ambiguities in young women's marital status have important bearing

on how society perceives a pregnancy. Yet there are many problems in taking premarital childbearing as the indicator of illegitimacy. The age at first marriage is only tenuously linked to the onset of childbearing in Africa, in part because diverse and ambiguous marriage practices have weakened the link. But dramatic new changes in economic opportunities, law, religion, and education are compounding the difficulty in defining the exact date of entry into marriage, which, in Africa, has long been recognized as a highly fluid institution.

The socioeconomic and cultural contexts of fertility in Africa suggest why adolescent pregnancy can have such different outcomes and why women might begin childbearing early or try to delay it. Adolescence is a key period of transition in life. During their adolescent years, women are likely to terminate their training; leave home; and begin conjugal life, childbearing, and adult work. Although fertility is highly valued, elders try to ensure that it occurs within sanctioned states in which (1) the parents have had adequate ritual or training preparation for the responsibilities of adulthood, and (2) the child has a recognized father, which implies access to a supportive paternal family. Hence, girls encounter strong social pressures against childbearing before they have had adequate preparation for adult responsibilities, and when no responsible father is in view.

Ages at first birth are strongly correlated with the educational attainment of women, especially secondary education, and most African countries have successfully raised their levels of education within the past two or three decades. Causation may operate either way: Young women who acquire more education may limit their childbearing; or social strictures that discourage young women from returning to school after marriage or a pregnancy encourage them to remain unmarried or restrict their childbearing (whether through abstinence, contraception, or abortion) so that they may continue their educations.

Yet focusing solely on the relationship between education and fertility is problematic because few girls in Africa go far in their schooling. Alternative avenues for training older girls, such as trade apprenticeships, domestic service, or ritual initiation, engage far more girls than the small group who go on to secondary school. These other forms of training also require large time investments and may, like formal education, be associated with delayed marriage and entry into childbearing.

In order to assess the risks and consequences of early childbearing, we identify two distinct configurations of adolescent fertility. The first configuration involves married adolescents, quite frequently those in rural areas, who marry and give birth when they are very young. Childbearing for these young women commences with the approval, if not the insistence, of their families, for reasons of economic necessity or commitment to societal or religious norms that confer value on a woman through childbearing.

Problems, when they do arise among these very young women, stem primarily from physical immaturity: medical complications that a mother or her children suffer when her body is not mature enough to effectively nurture a fetus and give birth to a baby.

The second configuration, one of increasing prevalence in the subcontinent, involves social disapproval of adolescent childbearing under nonlegitimate conditions. The closest indicator of this problem that we have in survey data is premarital childbearing. Whereas childbearing in the past occurred largely within what was considered marriage, we now see increases in births to adolescents who report themselves as unmarried. Many adolescents are still attending school when they become pregnant. One consequence is that young women in such circumstances attempt dangerous abortions or suffer damage in the birth process that renders them infertile or endangers their lives. Again, the social context of childbearing is extremely important. Many prenatal clinics and family planning programs serve only married women, leaving unmarried teens to forgo these services or acquire them through informal channels or local medical practitioners.

These two configurations, of course, should be seen as the ends of a very long continuum. But, more importantly, we urge strong caution about accepting at face value even these apparently clear-cut consequences of adolescent fertility. It is virtually impossible to separate the effects of young age per se on health risks from the social effects produced by the father's refusal to recognize a child or the forsaking of a school career. In settings where fertility is expected to begin very early, by contrast, we know little about the consequences of *not* bearing children as an adolescent. We conclude that the social context of adolescent childbearing has an effect on the outcome for the mother and the child that is as important as the physiological maturity of the mother.

An increase in adolescent fertility outside of marriage is only one of many changes that affect the lives of African women. Other important trends include rises in formal education, informal training, urbanization, and the use of contraception. These changes, however, are part and parcel of an unfolding social context that, while it creates new opportunities for young women, also sharpens public antipathies toward adolescent fertility outside an approved relationship. In such situations, adolescent fertility per se may be changing less than the social context that condemns it.

Introduction

In sub-Saharan Africa, 15- to 19-year-olds account for a large and growing segment of the population, in contrast to Western countries, where this age group accounts for only a small and shrinking proportion of the total. According to the most recent United Nations estimate, there were 46 million 15- to 19-year-olds in sub-Saharan Africa in 1985 (United Nations, 1991). The numbers are projected to more than double, to 106 million, by the year 2010, setting an annual growth rate of 3.3 percent, the fastest in the world.

To policymakers and planners who must allocate scarce resources to numerous pressing health and social needs, the rapid rise in sheer numbers of adolescents poses an enormous challenge. These young people will require training and jobs. Moreover, their numbers have a major influence on overall population growth rates. In sub-Saharan African populations, marriage and childbearing begin early and contraceptive use is low. Consequently, adolescents account for a large percentage of all sub-Saharan African births; during the 1970s, about 33 percent of all fertility was attributed to women aged 15 to 24 (Gyepi-Garbrah, 1985a).

Besides posing challenges to society as a whole, adolescent fertility can have lasting and potentially devastating effects on adolescents themselves. In most African societies, adolescence is a key period, when several crucial events coincide. During their adolescent years, women are likely to terminate their training; leave home; and begin conjugal life, childbearing, and adult work. In countries where opportunities for female education have increased, many more girls now seek to prolong their school careers, a goal

that most national policies as well as family elders declare incompatible with motherhood. Hence, untimely pregnancies during these vulnerable years of training and transition can result in young women being forced to terminate their schooling, and thereby reduce their employment options in later life.

Furthermore, adolescent pregnancy and childbearing pose health risks for both mothers and children. In comparison to infants born to older mothers, infants born to very young mothers experience greater risks of prematurity, low birthweight, birth injuries, and mortality (Zabin and Kiragu, 1992). Young women are more likely than older women to attempt dangerous abortions or suffer damage in the birth process that renders them infertile or endangers their lives (Zabin and Kiragu, 1992). Adolescents who are active sexually incur serious risk of infection with sexually transmitted diseases, including AIDS; the prevalence of HIV (human immunodeficiency virus) infection is considerably higher among young African women than among older women or their male age peers (U.S. Bureau of the Census, 1992). All of these vulnerabilities are intensified where many adolescents and their infants fall through the cracks of program priorities. Many prenatal clinics and family planning programs serve only married women, leaving unmarried teens to forgo these services or acquire them through informal channels or local medical practitioners. All of these potential problems have obvious importance for individual adolescents and their children as well as for families and communities, whose well-being hinges on the health and welfare of their members.

Yet before one jumps to the most pessimistic conclusions about adolescent fertility in Africa, three points should be underscored. First, high fertility among adolescent women in Africa is nothing new. Data from the new Demographic and Health Surveys (DHS) reveal that although some countries are experiencing increases in birth rates to teenagers, others are experiencing declines. In fact, despite marked changes in women's patterns of education, marriage, and work, the percentage of women giving birth before 20 has remained surprisingly constant in many areas for as long as we have records.

Related to this first point is the second: Because children are highly valued and because most childbearing occurs within marriage, most adolescent childbearing in Africa is not only quite normal; it is strongly desired. DHS results leave little doubt that among married teens, the overwhelming majority of first births have been intended and wanted. These children become valued members of families, and their health and development are carefully nurtured. Indeed, a major reason why many African women marry young is precisely in order to begin childbearing early. Accordingly, in studying adolescent fertility in Africa, one should not necessarily assume that it is a problem, the way it is usually perceived in the United States.

Finally, adolescents in Africa merit close attention for quite a different reason. In a region where very few people use contraception, a rise in the proportion of adolescents using it may signal an important step toward a general decline in fertility. Caldwell et al. (1992) have contended that adolescents will be key players in a likely transition in fertility in Africa—one that will be fundamentally different from transitions elsewhere in the world, in which women lowered their fertility by ceasing to bear children after they had had a certain number. It remains unclear, of course, whether African adolescents will be the wave of a contracepting future for all age groups, or are simply temporary members of an age group that increasingly will delay childbearing.

In any case, the topic of adolescent fertility needs to be placed into a wider perspective that attempts to capture the enormous heterogeneity in economic regimes and social life within the region, a heterogeneity that generates very different reactions to early childbearing. It is within these contexts that we can begin to understand changes in adolescent fertility as well as some surprisingly resilient continuities.

CHANGES IN TWO CONFIGURATIONS OF ADOLESCENT FERTILITY

It is difficult to convey the sense of serene normalcy with which most adolescent childbearing is received in many parts of Africa: 12 and 13 are not uncommon ages of marriage in some areas. Certainly a woman in such a society who has not borne a child by 17 or 18 causes mounting anxiety in her husband and family. By contrast, a woman of 21 who becomes pregnant while still in teacher's training college may become so distraught that she attempts an abortion in dangerous circumstances.

We can best comprehend the childbearing dilemmas that African adolescents face by setting out two distinct configurations of adolescent fertility and the very different problems associated with them (see Zabin and Kiragu, 1992). The first configuration involves married adolescents, quite frequently those in rural areas, who marry and give birth when they are very young. Marriage and childbearing for these young women commence with the approval, if not the insistence, of their families, for reasons of economic necessity or commitment to societal or religious norms that confer value on a woman through childbearing. Many women who marry very early do not begin childbearing immediately, whether because of physical immaturity, because of subfecundity, or because their families or co-wives protect them from full sexual exposure for a year or two after marriage. How much this pattern may have changed from the past is not clear—whether, for example, the initial period of abstinence after marriage has collapsed or expanded, and whether any shortening of the period has been offset by gains in earlier

physical maturation. Yet problems, when they do arise among these very young women, stem primarily from physiological immaturity: medical complications a mother or her children suffer when her body is not mature enough to effectively nurture a fetus and give birth to a baby. Such problems may include low birthweight among infants, delayed or obstructed labor, ruptures in the birth canal, or death to the mother or child, or both.

It is much easier to chart changes in the second configuration, one of increasing prevalence in the subcontinent, which involves unmarried adolescents. The timing or sequencing of training, marriage, and childbearing has undergone dramatic changes. Although, as we have pointed out, no major changes have occurred over the last generation in the overall teenage birth rate, a striking change has taken place in the marital context of births. Whereas in the past children were born largely within what was considered marriage, now we see increases in births to adolescents who report themselves as unmarried. Many adolescents are still attending school when they become pregnant.

These two configurations, of course, represent highly distilled types. Many unmarried young women in urban areas are *not* attending school; and young women in rural areas may attempt abortion in greater numbers than we realize. In fact, these two types should be seen as the ends of a very long continuum. At any rate, early childbearing clearly shapes a woman's subsequent life chances and those of her children—whether for good or ill. How, then, can we try to understand why certain outcomes are more likely in some situations than in others? Because the second pattern appears to be spreading, and because it draws most public as well as research attention, we devote most of our report to it.

Kulin (1988) argues that in the context of a generally intense cultural emphasis on fertility in Africa, pregnancies to unmarried teenagers are virtually the only ones deemed wrong. Yet the reasons for this censure are not necessarily the same as those in other regions of the world. Kulin points out that in many European countries adolescent pregnancy is perceived as a health risk. In both the United States and Africa, by contrast, adolescent fertility is generally perceived as a moral problem: one of illicit sexual activity.

In the past, young African women tended to move directly from childhood to adult responsibilities. In many countries, however, the once brief interlude between childhood and adulthood appears to be lengthening. One reason may be that, as some evidence suggests, age at menarche may be declining; but the main reason is that labor migration and schooling are delaying marriage. Young men, by contrast, once had to wait out a long period of "youth" before marrying and raising children. Nowadays, according to scattered ethnographic evidence, men in some areas may be reproducing at younger ages than those in the immediate past. Still, although the

age gap between sexual partners may be closing in some areas, partners in reproduction are not necessarily becoming partners in marriage.

The negative health consequences of early childbearing that stem from immature physiology are the same no matter what the marital status of the young woman. But in contrast to the cases in which a woman desires pregnancy so much that she begins too soon, adolescents who become pregnant in situations of increasing economic and educational opportunities for women are subject to two quite different sets of problems: reduced socio-economic prospects and medical trauma resulting from abortion attempts.

This report examines the factors that determine when childbearing begins and why it is met by celebration or recrimination. We show that although fertility remains a very strong value, society sanctions it less through marriage, strictly defined, than by two other principal conditions: (1) the mother has had adequate preparation for the responsibilities of adulthood, and (2) the child has a recognized father, and thus access to a supportive paternal family. Of necessity, we focus on women because information on reproduction comes almost exclusively from them. Although this research emphasis is justified to a great extent in that women incur most of the immediate consequences of childbearing, it leaves the fertility behavior and goals of men highly understudied.

ANALYTICAL FRAMEWORKS FOR EXPLAINING CHANGE IN ADOLESCENT FERTILITY

Documenting trends in adolescent fertility is simple compared to the task of explaining them and assessing their consequences. Many of the problems connected with sexuality and fertility among unmarried adolescents have been attributed to the erosion of moral codes and familial control that has resulted in increasing illicit sexual activity. Other explanations have drawn attention to teens' inadequate knowledge or use of contraception. This report tries to move toward a broader understanding of entry into childbearing under dramatically changing conditions in contemporary Africa. As we examine some of the causes and consequences of adolescent fertility, a complex story emerges. Before we begin, it is useful to clarify the assumptions that underlie our analysis and that guide our interpretations of the data.

Much of the scholarship of previous eras assumed that Western forms of knowledge and technological innovations would inevitably supplant indigenous African ways. Such assumptions lay behind the urgent calls to anthropologists by Franz Boas and his student Margaret Mead to launch ethnographic expeditions to describe "traditional" cultures before they were lost beneath the crushing tide of modernization. We have clearly moved beyond this view, recognizing that nowhere have "traditional" societies re-

mained frozen in a timeless past until the modern world intruded. In Africa, not only have local societies changed perpetually, but they have managed, even in the face of political and economic domination, to reject changes or shape them in culturally specific ways (see, for example, Ajayi, 1969; Peel, 1983).

Although contemporary scholarship now assumes that change has been occurring continually in Africa, there is a strong sense that the twentieth century has witnessed rates and kinds of change that far surpass those of the past. Among all these dramatic changes, two that have drawn a great deal of attention in this century are changes in marriage and sexuality. Three quite different strands of thought have dominated the interpretation of African fertility in general and adolescent fertility in particular. First is the assumption that Africa's sexual and reproductive patterns are largely culturally determined: that is, present-day patterns are variations on very old themes established during centuries of indigenous adaptation to socioecological conditions. This position is explicitly taken in ethnographic cross-cultural studies such as those of Whiting et al. (1986) and Whiting and Whiting (1991) on the duration of "maidenhood"; and it has been used more recently by the Caldwelles with respect to the focus of African values surrounding reproduction and social life on the ways of ancestors (Caldwell and Caldwell, 1987). But it figures implicitly whenever cultural explanations—that is, those that rest on persistent, profound, even unconscious elements—of sexuality and reproduction are invoked, such as polygyny, the positive valuation of sexuality, marriage as a process rather than as an event, and the enormous importance of ancestral lines of descent.

Second, changes in marriage and fertility patterns have been explained by changes in the requirements of production and intergenerational property transmission across varying regional and ethnic traditions. For example, Lesthaeghe (1989b) draws on the World Fertility Survey (WFS) and Human Relations Area Files, taking ethnic groups as the units of analysis to test quantitatively whether some of Goody's (1976) social and cultural theories about property holdings and inheritance explain contemporary variations in marriage and fertility. Theories developed by Boserup (1965, 1990) of the effects of increasing population density on agricultural production also exemplify such a tack, suggesting that land fragmentation and changes in the demand for labor alter the value of early marriage and high fertility. These approaches are most relevant to rural areas, where production ranges from subsistence farming to cash crops. They tend to assume that reproductive decision making has an important collective component; that is, fertility involves self-conscious strategizing, but by families or communities, rather than by individuals or couples in isolation.

The third set of approaches to interpreting fertility in Africa also relies on economic decision making. They assume that decisions about marriage

and reproduction result from individuals' strategies, chosen within the current educational and occupational structures. The individual (or couple) assesses such factors as the costs of education, the availability of employment, the costs versus the benefits of children, and the compatibility of work and childbearing. Much of the current survey work is in this mode, drawing on African culture or social organization and documenting individual characteristics and life circumstances to supply explanatory variables.

There are combinations of these approaches as well. Caldwell's earlier work (1982), as well as work by Handwerker (1991) and Cain (1984) on the status of women, combines the property/status framework which operates at the societal level, and the economic opportunity framework which operates at the individual level, assuming that the latter can reinforce or alter the former. Lesthaeghe's analyses (1989b) trace contemporary reproductive patterns directly from indigenous property structures and cultural values. This research strategy makes some assumptions that are particularly risky because African economic life has been fundamentally reoriented over the course of the twentieth century by religious conversion, labor migration, female literacy, and other twentieth-century phenomena. Still, in trying to understand adolescent reproductive behavior, we find some important pieces of support for Lesthaeghe's general idea that many of the practices and values of precolonial society figure strongly in current patterns. (The verb tense he uses, the "ethnographic present," referring to persisting characteristics and not to any specific moment in time, is a recognized, if controversial, convention.)

Despite the disparity among the units of analysis and data that each framework calls for (as set out in the appendix to this report), all these frameworks are relevant to some extent for understanding the population dynamics of modern Africa. People are constantly innovating on old cultural themes, managing family property, and struggling to make a living in rapidly changing national economies—all at the same time. People collectively and individually try to control their life trajectories and those of their children in light of their situations, in hope or in panic or despair. In times of rapid change they may have to reorder priorities quickly and often. One of the main aims of the report, then, is to examine research done in each framework, and to search for common ground. To fulfill this agenda we highlight in particular the changing social organization within which the biological processes develop and acquire meaning.

OUR APPROACH: SOCIAL INFLUENCES ON THE OUTCOMES OF ADOLESCENT FERTILITY

Adolescent childbearing could well be presented as a study of reproductive physiology: How soon does menarche arrive, when do regular

sexual relations begin, and how safe is childbirth for physically immature mothers? Yet, in trying to piece together this report, we have been struck repeatedly by the inextricable linkage between biology and society. Physiological immaturity itself can bring about harmful consequences. However, forces in the larger society and economy that either support adolescent fertility or condemn it exert a powerful additional influence.

One much-discussed example of how biology and society interact is in the various pathways across the "biosocial gap" between menarche and socially sanctioned childbearing. The wider this gap, the more space for different pathways and the greater the risks of social disapproval and deleterious effects on health and life opportunities. But this measure is at best a crude indication of the myriad ways in which society can make itself felt. Even in African countries without explicit policies that discourage adolescent childbearing, pregnancy among unmarried urban schoolgirls often ignites public outrage. Disapproval surfaces most visibly in policies that expel pregnant girls from school or screen them for pregnancy as a prerequisite for admission to advanced education. So powerful are these sanctions that fears of condemnation for illicit pregnancies make many adolescents avoid clinics where contraceptives are dispensed, forgo prenatal care, attempt abortion, or avoid bringing their babies to clinics for treatment or basic preventive care. Social forces, then, define what is not appropriate and thus place pressure on girls to hide evidence of their misdeeds. Cases in which early childbearing is condemned often occur when women have new opportunities to take up careers outside the home. To exploit these opportunities, they must delay marriage or childbearing in order to undertake education or training.

In rural areas, where women marry and begin childbearing very young, a more plausible case might be made that the deleterious consequences of adolescent fertility stem from the "natural" consequences of immature maternal physiology. Yet even here, social and economic pressures to marry early lay the groundwork for harmful outcomes.

Although social influences constitute formidable pressures in both contexts, their results are entirely different. The problems a pregnant urban schoolgirl confronts arise not because society is indifferent to her pregnancy, but because society condemns it, viewing early childbearing among unmarried schoolgirls as a painful wound in the social fabric. The irony is that because society often views marriage and childbearing among very young, uneducated rural women as normal and appropriate behavior, the health problems they incur draw comparatively little attention.

Another condition that affects both configurations is that the responses to, and implications of, a pregnancy can be quite unpredictable. For example, the legal rubrics for resolving property claims in cases of premarital births can be intrinsically ambiguous (see cases in Armstrong, 1987). The

freedoms given by one set of measures can be negated by another (Guyer, 1986a), and provision for exceptions can effectively assign final responsibility for decisions to the courts.

The fact that indeterminacy is a persistent condition with which people live as they make conjugal and reproductive decisions means that one event does not automatically cause another, even though the former may have preceded the latter. A young woman may become pregnant in *anticipation* that she will marry, but she can test the man's reaction to the news and try to retrench if needed. That indeterminacy is so persistent also means that people have clear interests in the way kinship categories such as "wife" and "father" are applied. Hence, they will attempt to use them or even to manipulate them to their own advantage to achieve favorable outcomes. In this way reproduction should be viewed as a social process, as well as a physiological event.

PLAN OF THE REPORT

The report moves from basic descriptive data toward explanations of the patterns they reflect. It also attempts to describe some consequences of adolescent fertility.

Chapter 2 presents recent data, primarily from the Demographic and Health Surveys, that describe some contemporary patterns in adolescent fertility, and outlines trends by comparing current patterns to those from a generation ago. Some of the key variables examined include knowledge and use of contraception, and ages at first marriage, earliest sexual experience, pregnancy, and birth. The most significant finding is a rise not in overall rates of adolescent fertility but in childbearing among women who do not appear to be married. The report builds on the fact that many of the problems of adolescent fertility appear to stem from condemnation of what is seen as premarital childbearing.

Whereas in most societies the age at first marriage is linked closely to the onset of childbearing, in Africa these two events are linked only tenuously. Diverse marriage practices, as Chapter 3 shows, account for some of the weakness of the link; even more basically, marriage is usually less a clear-cut state than an extremely ambiguous process. Dramatic changes in economic opportunities, law, religion, and education are compounding the difficulty in defining what has long been recognized as a highly fluid institution. For women, this ambiguity can offer both advantages and disadvantages. Some women can exploit it to test new opportunities for work and spouse selection. Others may find themselves stalled in a remote holding stage of the marital process by urban married men who must maintain the appearance of monogamy. The resulting differences in views of marital status have important bearing on the perceived legitimacy of a pregnancy.

To explain why adolescent pregnancy can have such different outcomes and why women might begin childbearing early or try to delay it, Chapter 4 describes the socioeconomic and cultural contexts of fertility in Africa. It shows that although fertility is highly valued, elders try to ensure that it occurs within sanctioned states in which paternity is recognized and the parents are prepared for adulthood. Because there is much information on the preparation of women for adult roles and very little on paternity, the following two chapters focus on women's education and learning. Larger implications about paternity are drawn indirectly.

One of the most common questions asked about fertility is, What makes women delay childbearing? Education is almost invariably the first answer offered. Documenting an enormous surge in levels of education within the past two or three decades in Africa, Chapter 5 shows a strong correlation between ages of first births and female educational attainment, especially secondary education. Although education is usually assumed to delay fertility, it could be, instead, that early childbearing terminates education. The direction of causation between these two variables is a pivotal question for adolescents in countries where policies at many levels make it extremely difficult for a schoolgirl who becomes pregnant to complete her education. But if we also accept the premise that education very likely does influence adolescent fertility, how, specifically, does it do so? DHS data suggest that better knowledge of contraception or of the fertile period is unlikely to be the key factor. As Chapter 6 asserts, training and fertility are regarded as two essential but mutually exclusive requirements for a successful adult life. Hence girls encounter strong social pressures against childbearing before they have had adequate preparation for adult responsibilities. Because some forms of training require more time and monetary investment than others, they may be associated with delays in marriage and entry into childbearing.

Seeking material to pursue this notion, we take an exploratory tack. Chapter 6 investigates alternative avenues for training for older girls, such as trade apprenticeships, domestic service, or ritual initiation: activities that involve a far larger number of girls than those who go to secondary school. By drawing inferences from two disparate kinds of data, national-level statistical studies of economic patterns and microlevel qualitative studies, we show that economic opportunities for women in the wider society open other forms of training that may affect fertility in ways that parallel the effects of formal schooling.

Chapter 7 attempts to assess the risks and consequences of adolescent fertility. It focuses on the topic on which there is most research, health risks, and speculates about demographic and social concomitants. Yet we urge strong caution about accepting at face value even these apparently clear-cut findings. It is virtually impossible to separate the effects of young

age per se on health risks from the social effects produced by, for example, the failure of a father to recognize a child or the forsaking of a school career. Nor do we fully comprehend the consequences of *not* bearing children as an adolescent in settings in which fertility is expected to begin very early. What do adolescent women gain by becoming pregnant, and how do the possible benefits compare to the costs? We conclude that the physiological problems of early childbearing most often occur in rural areas where health care is least able to cope with the needs of adolescents; by contrast, in urban areas with better health care facilities, social condemnation for what is now perceived as an inappropriate pregnancy often prevents young women from seeking assistance and, moreover, pressures them to take health risks. In these situations, it seems apparent that the social context of adolescent childbearing is as important as the physiological maturity of the mother.

Levels and Trends in Adolescent Fertility

Measures of schooling, marriage, fertility, and contraceptive use are basic to the study of adolescent fertility. Taking data on such factors from the 11 sub-Saharan African countries for which recent Demographic and Health Survey (DHS) data are available, this chapter provides a broad overview of current levels of, and recent changes in, adolescent fertility.¹ Subsequent chapters add more detail as related topics emerge.

LEVELS OF EDUCATION, SEXUAL EXPERIENCE, MARRIAGE, FERTILITY, AND CONTRACEPTIVE USE AMONG ADOLESCENTS

Beginning with current levels, Table 2-1 presents a summary of basic cross-national DHS data on educational attainment, sexual activity, marriage, and fertility among African women aged 15 to 19. The first three columns display information on education. Total school enrollments in sub-Saharan Africa rose at an average annual rate of 7.1 percent between 1960 and 1980 and of 4.6 percent between 1980 and 1983 (World Bank,

¹Note that four of these countries also participated in the World Fertility Survey (WFS). A recent analysis of age at marriage and age at first birth that utilized both WFS and DHS data reports findings that are quite similar to ours (Westoff, 1992).

TABLE 2-1 Education, Sexual Activity, Marriage, and Fertility Among Women Aged 15-19, Selected Sub-Saharan African Countries: Percentage of Women Except as Noted

Country and Year of Survey	Education		Fertility				Birth Rate 15-19 (per thousand) ^a	Births to Group as Percentage of all Births ^a
	Primary	Secondary and Higher	Sexually Experienced	Ever Married	At Least One Birth	Currently Pregnant		
Botswana, 1988	95	38	66	6	23	5	127	19
Burundi, 1987	26	1	9	7	3	3	52	5
Ghana, 1988	81	7	50	24	19	4	130	13
Kenya, 1988/1989	95	21	46	20	21	4	153	16
Liberia, 1986	63	22	82	36	37	8	188	20
Mali, 1987	24	0	76	75	44	6	209	17
Nigeria, 1990	67	34	55	39	23	5	144	16
Senegal, 1986	32	14	^b	44	26	4	161	18
Togo, 1988	63	16	64	27	21	5	129	15
Uganda, 1988/1989	79	12	62	41	30	7	186	20
Zimbabwe, 1988/1989	98	50	32	20	16	4	103	15

^aBased on births in the four years before the survey.

^bUnmarried Senegalese women were not asked about sexual experience.

SOURCE: Demographic and Health Surveys Standard Recode Files, weighted data.

1988). The expansion of education of young women was particularly rapid. Yet as the table shows, there is enormous variation across the region in levels of primary and secondary schooling among young women. In Kenya, Zimbabwe, and Botswana, 95 percent of women aged 15-19 had attended at least primary school, compared with fewer than one-third in Burundi, Mali, and Senegal. In Burundi and Mali, no more than 1 percent had attended secondary school.

In most countries, the DHS also asked women their age at first sexual intercourse. As Table 2-1 indicates, a large percentage of 15- to 19-year-old women are already sexually experienced, although again there is considerable variation across countries, from over 80 percent in Liberia to under 10 percent in Burundi. While the mean age at first marriage remains relatively low overall, in some countries a large proportion of young women appear to be sexually active before they marry. In Liberia, 36 percent of women aged 15-19 had married, but 82 percent of women in that age range acknowledged sexual experience. For countries like Liberia and Botswana, the age when a woman first marries may be an unreliable indicator of entry into regular sexual activity and exposure to the risk of pregnancy.² For countries like Burundi and Mali, however, age at first marriage appears to be a highly accurate indicator of entry into sexual experience. Only 1 or 2 percent of women in these countries reported engaging in sex before marriage.

Because women in many countries marry so early and report early sexual experience, high rates of fertility among adolescents are not surprising. In

²Botswana appears to be an extreme case: Only 6 percent of women aged 15-19 report having ever been married as of 1988, whereas 66 percent report being sexually experienced. These estimates, however, are significantly different than those from an independent survey, the Contraceptive Prevalence Survey (CPS), conducted four years earlier, in 1984. The CPS reports a much higher proportion of women married. What should we make of this finding? Has there been an unexpected change in the pattern of marriage in Botswana over the period 1984-1988? The answer is, probably not.

The DHS data are quite comparable to Botswana census data from 1971 and 1981 (van de Walle, 1993). In 1981 only 7 percent of women aged 15-19 in Botswana had ever been in a union; down from 13 percent in 1971. Almost certainly, the reason that the 1984 CPS and the DHS and census are so different is because the CPS asked women additional probes concerning women's marital status and their "partners."

Although we see no reason to exclude the Botswana results on adolescents' marital status, we are by no means claiming that these results—or those from any other country—are accurate. Quite the contrary: Almost any attempt to categorize unions as married or unmarried quickly runs into trouble in many African countries, because of the fluidity and ambiguity surrounding unions. Hence, there is no reason why the problems that the Botswana DHS encountered in trying to define marriage should be considered unique. Had other countries conducted a second independent survey, they might have found a similar tendency for more unions to be classified as marriage.

10 of the 11 countries listed, at least one in five women aged 15-19 had already had at least one child or was pregnant with her first child at the time of the survey. In those 10 countries the fertility rate ranged from 127 to 209 births per 1,000 women in their age group. Moreover, a large portion of all children are born to 15- to 19-year-olds. In Liberia, Mali, and Uganda, for example, these women accounted for around a fifth of all births in the four years preceding the survey dates.

Physiological readiness to conceive a child obviously influences when childbearing begins. According to Gyepi-Garbrah (1985a), age at menarche has declined more than one year since the early 1960s in Nigeria, and Adadevoh et al. (1989) indicate a similar decline in Ghana between 1946 and 1976. (See also Worthman and Whiting, 1987, for Kenya.) A question on age at first menstruation was included in the DHS only in Botswana, Burundi, and Senegal. (As with all survey data based on respondents' recall of events in the distant past, these data must be treated with caution.) The data from Burundi and Senegal do not reveal any decline in age at menarche over time, but in Botswana the reported age dropped from 16.2 years among women aged 40-49 to 15.3 years among 20- to 29-year-olds.

Table 2-2 focuses on another important aspect of the changing social context of fertility and reproduction in Africa: the rapidly rising knowledge and use of modern contraception. Women are almost certainly underreporting their knowledge and use of modern contraception (see, for example, Bleek, 1987). Still, the data show relatively high levels of knowledge among the youngest women, but far lower levels of usage. Among women of 15 to 19, reported knowledge of modern contraception, as well as of local sources for it, varies widely across the region. In Botswana, Kenya, and Zimbabwe, more than 75 percent of adolescents reported knowing about modern contraception, compared with only 29 percent in Mali. Not surprisingly, the young women who are most knowledgeable about contraceptives are those living in urban areas or in households with a radio or television, or those who have more education (calculations not shown). Knowledge of a source where modern contraceptives can be acquired manifests similar variations.

Although many young women know about contraception and some know where it can be acquired, they do not necessarily use it. Table 2-2 shows that with the exception of Botswana and Zimbabwe, few young women report ever using modern contraception, and very few were using it at the time of the survey. In Botswana and Zimbabwe one in five adolescents was using a modern method of contraception, primarily the pill. Elsewhere, 5 percent or fewer were using a modern contraceptive.

The reported lack of use of contraception, compared with the rest of the world, appears to reflect young women's strong desires to begin having children as soon as possible after marriage. Table 2-3 lends support to this thesis. It shows that in eight of the ten countries for which the comparison

TABLE 2-2 Knowledge and Use of Contraception Among Women Aged 15-19, Selected Sub-Saharan African Countries: Percentage of Group

Country	Knowledge About Contraception			Ever Use		Current Use	
	Traditional Only ^a	Modern ^b	Source of Modern	Traditional Only	Modern	Traditional Only	Modern
Botswana	0	94	93	2	37	1	21
Burundi	3	40	36	14	4	5	2
Ghana	2	57	48	13	12	9	3
Kenya	4	76	73	20	9	10	4
Liberia	1	63	63	4	13	1	5
Mali	13	29	21	18	4	8	2
Nigeria	1	39	29	4	4	4	2
Senegal	20	59	58	11	1	5	1
Togo	4	74	70	19	8	14	3
Uganda	5	68	62	16	6	2	2
Zimbabwe	1	88	80	8	3	4	22

^aTraditional methods include abstinence, rhythm, withdrawal, and the use of ritual charms or potions.

^bModern methods include pills, IUDs, injectables, condoms, vaginal methods, and male and female sterilization.

SOURCE: Demographic and Health Surveys Standard Recode Files, weighted data.

TABLE 2-3 Current Use of Contraception Among Sexually Experienced Women Aged 15-19 by Marital Status, Selected Sub-Saharan African Countries: Percentage of Group

Country	Modern Method ^a		Traditional Method Only ^b	
	Currently Married	Never Married	Currently Married	Never Married
Botswana	15	22	3	1
Burundi	1	^c	4	^c
Ghana	2	3	3	15
Kenya	6	2	7	12
Liberia	2	7	0	3
Mali	1	^c	8	^c
Nigeria	1	11	1	23
Senegal	1	^d	9	^d
Togo	2	7	3	17
Uganda	1	3	1	5
Zimbabwe	27	14	1	7

^aModern methods include pills, IUDs, injectables, condoms, vaginal methods, and male and female sterilization.

^bTraditional methods include abstinence, rhythm, withdrawal, and the use of ritual charms or potions.

^cFewer than 25 cases.

^dUnmarried Senegalese women were not asked about sexual experience.

SOURCE: Demographic and Health Surveys Standard Recode Files, weighted data.

can be made, a greater proportion of sexually experienced, never-married women than of married women use both traditional and modern contraception. The absolute percentages are not large; but they are remarkable inasmuch as social and economic barriers make it difficult for adolescents in general, and particularly unmarried ones, to obtain modern contraceptives. Another surprise is that large numbers of sexually active, unmarried adolescent women in Ghana, Kenya, Nigeria, and Togo are using traditional methods of contraception instead of modern methods. One explanation for this anomaly may be that many countries, trying to discourage promiscuity, heavily restrict the use of modern contraceptives by unmarried women. Another explanation may be that women who have barely begun their childbearing careers fear impairment of fertility from the potent drugs that they know Western contraceptives contain (for some evidence for this hypothesis from The Gambia, see Bledsoe et al., 1993).

In Chapter 1, we highlight two distinct configurations of adolescent fertility. The first comprises women who marry and give birth at extremely young ages, often in rural areas, away from adequate medical care. The

TABLE 2-4 Urban-Rural Differences in Education, Marriage, and Fertility, Women Aged 15-19: Percentage of Group Except as Noted

Country	No Education		Ever Married		Birth Rate ^a	
	Urban	Rural	Urban	Rural	Urban	Rural
Botswana	2	7	7	6	115	134
Burundi	21 ^b	76	18 ^b	6	130 ^b	48
Ghana	14	22	20	28	91	155
Kenya	5	5	30	18	130	159
Liberia	25	48	29	43	173	202
Mali	43	90	74	76	172	224
Nigeria	16	41	22	45	91	164
Senegal	41	91	20	63	98	212
Togo	18	51	11	39	72	169
Uganda	12	22	32	42	139	194
Zimbabwe	2	3	12	24	83	113

^aBased on data from the four years before the survey.

^bFewer than 50 cases.

SOURCE: Demographic and Health Surveys Standard Recode Files, weighted data.

second configuration consists of unmarried adolescents, often schoolgirls, living in urban areas whose pregnancies provoke condemnation. These women may be expelled from school, be forced into premature marriages, or face difficulty obtaining appropriate medical care. Table 2-4 highlights the differences in education, and in the timing of marriage and fertility, between urban and rural women. The table shows that in most countries, rural 15- to 19-year-old women are less likely than urban women to have attended school, but more likely to be married and to have given birth. In 10 of the 11 countries, the birth rate of women aged 15-19 is higher in rural areas than in urban areas.

But although Table 2-4 provides broad support for the urban-rural differences advanced in the two configurations, it dispels any conviction that the two configurations form two neat, mutually exclusive groups. In Mali, for example, nearly three quarters of urban women aged 15-19 have already married, a fact that undermines the assumption that only rural women marry at exceptionally young ages. Nor do urban women always surpass rural women in school achievement. In Zimbabwe over 95 percent of women living in rural areas have attended at least primary school.

Just as there are important differences in adolescent fertility between urban and rural areas, there are often large regional differences within countries. Nigeria is the most salient example. The most populous country in sub-Saharan Africa, Nigeria has over 350 ethnic groups and vastly different geographic and economic zones. Table 2-5 shows enormous differences in

TABLE 2-5 Regional Differences in Education, Marriage, Contraceptive Use, and Fertility of Women Aged 15-19 in Nigeria, 1990: Percentage of Group Except as Noted

	Northeast	Northwest	Southeast	Southwest	Total
Education					
No education	66	66	10	4	29
Primary	25	17	47	26	30
Secondary or more	9	17	44	69	41
Marriage					
Ever married	74	70	21	9	36
Contraceptive Use					
Any method of contraception	4	3	8	15	9
Modern method	3	3	4	8	5
Fertility					
Birth rate (per thousand)	224	194	106	74	146
At least one birth	40	41	14	8	22
Pregnant with first child	11	6	3	2	5
Sample size	352	308	570	381	1,612

SOURCE: Nigeria Demographic and Health Survey Standard Recode File, weighted data.

education, marriage, contraceptive use, and fertility across the four principal regions. The Northeast and the Southwest represent the extremes. In the Northeast 66 percent of women aged 15-19 have never been to school, 74 percent are already married, and 51 percent are either already mothers or pregnant with their first child. In the Southwest, the other end of the spectrum, only 4 percent of young women have never been to school, only 9 percent have ever been married, and only 10 percent are mothers or are now pregnant with their first child.

TRENDS IN EDUCATION, MARRIAGE, AND FERTILITY AMONG ADOLESCENTS

How have educational attainment, marriage patterns, and fertility rates changed over time? The rest of the tables in this chapter document major trends in these variables for the 11 countries for which DHS data are now available. They reveal trends by comparing the adolescent experiences of each cohort of women between 20 and 39 years of age. Because the experiences of women who are currently 15 to 19 years old are incomplete, figures from this group are not included. Instead we use the reports of women aged 20-24 as a guide to the experiences of women who most recently

finished their teen years. Similarly, the percentage of women aged 30-34 will indicate the behavior of adolescents 10 to 15 years ago, and so on. We cannot, however, compare the knowledge and use of contraceptives in their youth of women now in middle age. These data were not collected in the DHS because middle-aged women cannot be expected to remember accurately how much they may have known about contraception or practiced it many years earlier.

We have ignored the responses of women over 40 for several reasons. First, these data rely on long periods of recall and are generally unreliable. In reconstructing birth histories, older women are prone to omit births that occurred long ago, especially if the child subsequently died. Furthermore, they tend to move forward the timing of the births so that they appear to have occurred more recently than was actually the case (Potter, 1977). Finally, because marriage in Africa is better viewed as a process rather than an event, we suspect that older women, more so than younger ones, may underreport premarital births because the unions into which these children were born would have had more time to mature into recognized marriages.

Education

Formal education for women, particularly secondary education, is widely correlated with low female fertility and low child mortality in sub-Saharan Africa (Teachem et al., 1991; Cohen, 1993). Accordingly, trends in education likely have important bearing on adolescent fertility and its concomitants. Moving from the oldest five-year age group to the youngest in Table 2-6, we see that female schooling has increased over time in every country. However, the degrees of change vary widely. In some countries, a revolution in women's schooling has occurred over the past generation; others have seen only small changes. In secondary education, Zimbabwe has experienced the sharpest increase. Just 14 percent of the oldest women we studied, those from 35 to 39 years of age, attended secondary school, compared with 51 percent among women of 20 to 24. The rise in secondary school attainment is also substantial in Botswana, Kenya, Liberia, and Nigeria, especially in Ondo State in southwest Nigeria (data not shown). Several other countries have had less pronounced but still noticeable increases. Only in Burundi and Mali have fewer than 10 percent of the youngest women attended secondary school.

Marriage

In a recent analysis of the World Fertility Surveys (WFS) and the Demographic and Health Surveys, van de Walle (1993) found only limited evidence of a recent trend toward later age at first marriage. To the extent

TABLE 2-6 Percentage of All Women Aged 20 and Older, by Highest Level of School Attended

Country and Educational Level	Age at Time of Survey			
	20-24	25-29	30-34	35-39
Botswana				
Primary	49	46	45	53
Secondary+	36	25	20	12
Burundi				
Primary	19	18	14	14
Secondary+	3	3	3	1
Ghana				
Primary	60	53	53	43
Secondary+	10	11	7	5
Kenya				
Primary	56	54	46	48
Secondary+	35	28	17	10
Liberia				
Primary	21	12	10	6
Secondary+	31	20	16	10
Mali				
Primary	16	17	14	6
Secondary+	2	2	2	1
Nigeria				
Primary	27	24	22	20
Secondary+	31	22	8	7
Senegal				
Primary	18	15	13	9
Secondary+	11	9	8	6
Togo				
Primary	37	24	23	24
Secondary+	18	19	9	5
Uganda				
Primary	56	52	48	38
Secondary+	14	10	9	9
Zimbabwe				
Primary	42	62	65	69
Secondary+	51	20	17	14

SOURCE: Demographic and Health Surveys Standard Recode Files, weighted data.

that we can rely on data about marital status, as categorized in DHS. Table 2-7 shows that changes in reported ages at marriage have occurred more recently, and have been less dramatic, than changes in schooling. (We take conjugal unions, as the DHS did, to include both women reporting they were married and those reporting they were living with a man but not married.) In most countries, there was little difference in the proportion

TABLE 2-7 Percentage of All Respondents Aged 20 and Older Who Married Before Age 20, Selected Sub-Saharan African Countries

Country	Age at Time of Survey			
	20-24	25-29	30-34	35-39
Botswana	19	30	32	34
Burundi	44	57	58	54
Ghana	63	66	72	72
Kenya	52	65	68	71
Liberia	64	69	71	69
Mali	92	90	93	92
Nigeria	68	69	76	70
Senegal	70	76	79	85
Togo	63	69	71	66
Uganda	73	74	79	80
Zimbabwe	53	66	70	62

SOURCE: Demographic and Health Surveys Standard Recode Files, weighted data.

who had married before age 20 between women in their thirties and those in their forties at the time of the survey. But among women in their early twenties, the proportion reporting teenage marriages is lower almost everywhere. The changes have been greatest in Botswana, Kenya, and Zimbabwe. Changes are smaller but visible in all other countries except Mali. In all countries separate calculations indicate that marriage before age 20 is less common among those with more education. This finding suggests that education is largely incompatible with marriage.

We must be cautious in interpreting these DHS data on trends in age at marriage. As Chapter 3 explains, marriage in Africa is often less a discrete event than a process that develops over an extended period of time. Van de Walle (1993) highlights the difficulty in establishing the exact date a marriage begins, arguing that the apparent trend toward later age at first marriage could be exaggerated. Because conjugal relationships often develop gradually, a woman whose union endures may retrospectively report being married earlier than she would have if she had been asked at the time. Because first unions usually begin in the late teens, this response pattern would tend to exaggerate the distinctness of the women who currently form the youngest cohort.

Unlike retrospective DHS questions, census questions ask only current status. To supplement and check the DHS information, Table 2-8 examines trends in adolescent marriage for women aged 15-19 in sub-Saharan African countries by comparing census data for two points in time, whenever such data are available. In other cases, we were forced to use a less reliable

TABLE 2-8 Percentage of Women Aged 15-19 Who Were Ever Married, Selected African Countries, 1950-1985

Subregion and Country ^d	First Census or Survey	Second Census or Survey	Average per Annum (percentage points)	Date and Source of Data ^b	
				First Census or Survey	Second Census or Survey
Eastern Africa					
Burundi	19	7	-1.6	1979 C	1987 S
Kenya	45	29	-0.9	1962 C	1979 C
Mozambique	35	52	0.6	1950 C	1980 C
Rwanda	18	13	-0.4	1970 C	1983 S
Tanzania	52	38	-1.3 ^c	1967 C	1978 C
Zambia	42	32	0.9	1969 C	1980 C
Middle Africa					
Central African Republic					
Republic	58	47	-0.7	1959 S	1975 C
Congo	58	26	-1.4	1960 S	1984 C
Southern Africa					
Botswana	14	7	-0.6	1971 C	1981 C
Lesotho	22	26	0.4	1966 C	1977 C
South Africa	9	6	-0.1	1951 C	1980 C
Western Africa					
Benin	67	46	-1.0	1961 S	1982 S
Ghana	54	32	-2.0	1960 S	1971 S
Liberia	57	42	-1.2	1962 C	1974 C
Mali	79	75	-0.1	1960 S	1987 C
Senegal	63	55	-0.4	1960 S	1978 S
Togo	53	41	-1.0	1958 C	1970 C

NOTE: Includes only countries for which observations were available for at least two points in time.

^aFor several countries, data were not available before 1970.

^bC or S next to the date indicates whether the data are from a census or a survey.

^cData for mainland only.

SOURCE: United Nations (1990:65).

check on consistency: comparing census results with survey results (see van de Walle, 1993).

Despite problems of comparability between the sources, this table, like the DHS results, suggests that before 1970, the proportions of women aged 15-19 who were ever married at the time of the survey or census were quite high throughout the subcontinent. Only in Burundi, Rwanda, Botswana, and South Africa did fewer than 20 percent of women marry that young.

Fifty percent or more of adolescents were already married in Tanzania, Central African Republic, Congo, Benin, Ghana, Liberia, Mali, Senegal, and Togo. Western African countries generally had the highest proportions. In the 1970s and 1980s, increases in the reported ages at marriage could be detected in some countries. Mali still had a high proportion of adolescent marriages (75 percent), and three countries (Mozambique, Zambia, and Lesotho) recorded increases in the proportion of adolescent marriages. But most countries show declines in the proportions. These are most marked in Burundi, Tanzania, Congo, Benin, Ghana, and Liberia. If we can rely on the evidence presented in these last two tables, then, it indeed appears that the age at marriage has increased in many countries.

Fertility

Have these recent changes in schooling and marriage patterns affected the prevalence of teenage fertility? Three issues are important to the analysis that follows. One concerns childbearing itself. Because of the widespread trend toward more schooling and somewhat older ages at marriage, we might expect to find a decline in teenage childbearing. Table 2-9 shows such a change in six of the eleven countries, when fertility before age 20 for women aged 20-29 is compared with that for women of 30-39. The largest declines appear in Burundi, Kenya, and Zimbabwe. In two countries, Liberia

TABLE 2-9 Percentage of All Respondents Aged 20 and Older Who Have Given Birth Before Age 20, Selected Sub-Saharan African Countries

Country	Age at Time of Survey			
	20-24	25-29	30-34	35-39
Botswana	55	61	60	57
Burundi	27	37	36	38
Ghana	51	50	58	56
Kenya	58	67	70	67
Liberia	64	62	55	52
Mali	67	61	64	59
Nigeria	54	54	57	4
Senegal	59	61	60	61
Togo	56	58	64	55
Uganda	68	68	72	73
Zimbabwe	49	58	59	53

SOURCE: Demographic and Health Surveys Standard Recode Files, weighted data.

and Mali, teenage births increased, but the trend is erratic; moreover, for Liberia the quality of the data on birth history is poor (Arnold, 1990).

Trends in adolescent fertility do not necessarily indicate trends in conceptions. The DHS, however, asked only about children ever born. It avoided questions about abortions on the grounds that most women are reluctant to reveal this information and their answers would be unreliable. In Chapter 7, we discuss evidence from hospital records and other studies that suggest a rising incidence of abortions in Africa, especially in urban areas.

Aside from childbearing and abortion, the other standard topic in studies of adolescent fertility is premarital births. Declines in some populations across cohorts in proportions of both reported marriages and births to teens do not necessarily mean declines in premarital births. Have they, too, declined? The fluid nature of marriage in much of Africa makes it more complicated to sort out the sequencing of marriages and births. With these reservations, we use cross-sectional data to calculate two separate measures. The first measure we examine is the percentage of women who had a premarital birth by age 20 across various cohorts (see Table 2-10). Because dating the start of a marriage is difficult, for these calculations, we define a birth as premarital if it occurred one year before the reported age at first marriage. Using this criterion, we find only slight increases in women who give birth premaritally over the last 10 to 15 years.

Our second measure is the ratio of premarital births to all births to women under 20. Table 2-11 shows that in Botswana and Kenya, the percentages of all births to adolescents that occur before marriage have increased sharply. Modest increases in premarital births occurred in Liberia, Uganda, and Zimbabwe. In a third group of countries (Burundi, Ghana, Mali, Nigeria, Senegal, and Togo) premarital births rose little, if at all. Taken together, Tables 2-10 and 2-11 show slight increases in four countries in proportions of women giving birth premaritally, and more noticeable increases in five of the eleven DHS countries in proportions of premarital births.

These observed rises in proportions of premarital births are roughly paralleled by rises in ages at first marriage and in education. Whereas trying to calculate the extent of premarital sexual activity would be quite problematic, we assume that because young women who are attending school remain unmarried for a longer period, they are at risk of premarital sexual activity for a longer period of time. At the same time, the fact that women appear to be entering marriage at older ages implies that sexual activity among teenage women has probably not increased at all; indeed, it may well have declined in most countries. Still, the proportion of adolescents who have sexual intercourse before they marry probably has increased (Meekers, 1991); that is, younger women are less likely than older ones to have had

TABLE 2-10 Percentage of Women Aged 20-49 Who Had a Premarital Birth by Age 20, Selected Sub-Saharan African Countries

Country	Age at Time of Survey			
	20-24	25-29	30-34	35-39
Botswana	43	41	40	34
Burundi	2	0	1	1
Ghana	5	4	5	4
Kenya	20	18	17	13
Liberia	21	14	12	12
Mali	7	5	6	9
Nigeria	3	4	5	4
Senegal	6	6	5	4
Togo	9	7	10	10
Uganda	11	11	10	8
Zimbabwe	9	9	8	8

NOTE: Women who have given birth but never married and ever-married women who have given birth before marriage are counted as having had a premarital birth. Women who first gave birth after marriage, women who are married but have never given birth, and women who have neither married nor given birth are counted as not having had a premarital birth. Premarital births are defined as beginning one year before the date of first marriage reported in the DHS.

SOURCE: Demographic and Health Surveys Standard Recode Files, weighted data.

sex by age 15; but they are more likely to have had sex before marrying. In Ethiopia, a survey on sexual activity among urban youths reported that, even among unmarried women who reported that they were sexually experienced, 53 percent of women aged 15-19 and 44 percent of women aged 20-24 were not sexually active in the month prior to the survey (Manpower and Employment Department, 1991). And, in Banjul, The Gambia, the mean coital frequency in the past month among women aged 14-24 was 2.4 times for married women and 1.9 times for single women (Gambia Family Planning Association, 1988). Finally, a recent study on age at first sexual activity concluded that "the trend in age at first sexual intercourse across cohorts [in African countries with DHS data] tends either to the flat or to show a slight increase" (Blanc and Rutenberg, 1990:67).

Although the analysis so far has focused on differences among countries, we stress that countries differ internally as well, especially with respect to premarital births. Table 2-12 highlights some striking differences between urban and rural areas in the prevalence of premarital births. In

TABLE 2-11 Premarital Births as a Percentage of All Births to Women Under Age 20, Selected Sub-Saharan African Countries

Country	Age at Time of Survey			
	20-24	25-29	30-34	35-39
Botswana	77	62	61	57
Burundi	6	1	5	1
Ghana	9	6	8	6
Kenya	27	21	16	14
Liberia	28	18	18	18
Mali	7	5	8	14
Nigeria	6	7	9	8
Senegal	8	8	7	6
Togo	14	10	11	13
Uganda	13	13	1	8
Zimbabwe	14	12	9	13

SOURCE: Demographic and Health Surveys Standard Recode Files, weighted data.

TABLE 2-12 Premarital Births as a Percentage of All Births to Women Under Age 20, by Current Place of Residence, Selected Sub-Saharan African Countries

Country	Age at Time of Survey			
	20-29		30-39	
	Urban	Rural	Urban	Rural
Botswana	72	68	60	61
Burundi	9	2	8	4
Ghana	7	8	5	9
Kenya	30	22	18	16
Liberia	32	15	24	13
Mali	6	6	4	9
Nigeria	8	4	5	7
Senegal	12	6	10	5
Togo	17	10	17	9
Uganda	23	12	22	10
Zimbabwe	15	12	15	7

SOURCE: Demographic and Health Surveys Standard Recode Files, weighted data.

nine of the eleven countries, the proportion of premarital births to women now aged 20-29 was higher in urban areas than in rural areas. Furthermore, the proportion of premarital births rose over the decade in nine of the eleven urban areas, although in two countries the change was less than 2 percentage points. Furthermore, three countries, Botswana, Kenya, and Liberia, show big increases in both urban and rural areas.

PUTTING THE INDICATORS TOGETHER

The data and calculations we have reported here have shown substantial variation among countries in education, marriage, and early childbearing. No common pattern emerges. However, on the basis of the changes in the proportions of births that are premarital (Table 2-11), Table 2-13 identifies three groups of countries, each of which manifests broadly similar patterns of change over a decade, as evidenced by the difference in the results between women now aged 30-39 and women aged 20-29. We base the typology on trends in premarital births because such births indicate, however roughly, the changing social conditions under which entry into childbearing is occurring.

- Group 1: Botswana and Kenya have experienced (1) marked rises in proportions of births to young women that are premarital by our definition, (2) dramatic increases in the proportions of women who have attended secondary school, and (3) indications of increasing age at marriage.
- Group 2: Liberia, Uganda, and Zimbabwe show changes similar to those of Group 1, though generally not as marked.
- Group 3: In Burundi, Ghana, Mali, Nigeria, Senegal, and Togo premarital adolescent childbearing has increased little, if at all, and only Nigeria and Togo have experienced marked increases in female education.

Charts for three countries—Kenya, Uganda, and Mali—are used to illustrate the relationships among the three principal variables for each group in turn.

Group 1

Figure 2-1 displays trends for Kenya in three indicators: percentage of women who married before age 20, attended secondary school, and had a first birth a year or more before their first conjugal union. The figure shows a clear increase in secondary school enrollment, accompanied by an increase in the proportion never married under age 20 and an increase in the proportion of women having premarital births. Botswana is distinctive among the 11 DHS countries because of its consistently low proportions of women marrying before age 20 and high proportions of premarital births to this group.

TABLE 2-13 Recent Changes in Education, Marriage, and Fertility, DHS Countries in Africa:
Percentage Point Change Between Proportion of Women Aged 30-39 and of Women Aged 20-29

Group	Secondary Education	Teenage Marriage	Teenage Fertility	Premarital Births	
				Percentage of Women Having Given Birth Before Age 20	Births as Percentage of All Births to Women Under Age 20
1 Botswana	+++	—		+	++
Kenya	+++	—	-	+	++
2 Liberia	+++	-	++	+	+
Uganda	+	-	-	+	+
Zimbabwe	+++	-	-		+
3 Burundi		-	-		
Ghana	+	—	-		
Mali			+		
Nigeria	+++	-			
Senegal	+	—			
Togo	++	-	-		

NOTE: The following key applies: +++/— increase/decrease of more than 12 percentage points between groups; ++/— increase/decrease of 8-12 percentage points between groups; +/- increase/decrease of 2-7 percentage points between groups.

SOURCES: See Tables 2.6, 2.7, 2.9, 2.10, and 2.11.

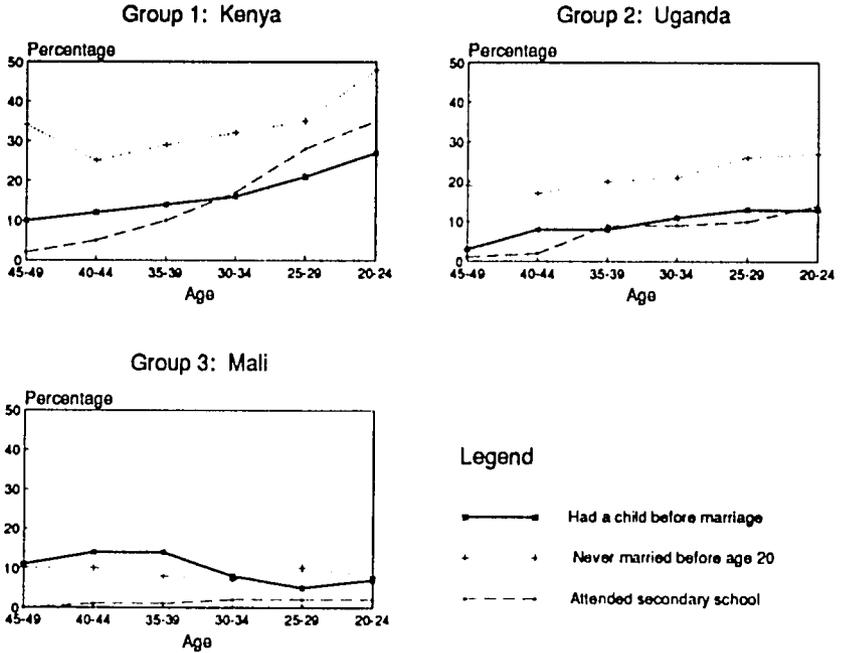


FIGURE 2-1 Trends in education, marriage, and fertility, selected sub-Saharan African countries.

The patterns for Group 1, then, are those of more schooling, delayed marriage, and higher proportions of premarital births. We stress once again that teenagers are not necessarily having more children; Kenya, in fact, has had a major decline in the proportion of first births before age 20 (see Table 2-9). But, among the births that do occur to adolescents, more are occurring outside of marriage. If there is a problem here, it arises not necessarily from increasing fertility; rather, it appears to stem from what society regards as mistimed births. (Chapters 3 and 4, however, provide some crucial qualifications for this generalization.)

The patterns manifested in Group 1 will sound familiar to contemporary Americans. Contrary to popular belief, the heart of the "teenage pregnancy problem" in the United States is not a rise in the number of births to teenagers. Indeed, American teenagers bear proportionally fewer children now than they did in the 1950s (Hayes 1987). Because Americans in the 1950s married at earlier ages than they do now, most teenage births occurred to married couples. Consequently, these births were not considered a social problem. Today, although a smaller proportion of teenagers give birth to children, these teenage mothers are much less likely to be married

because of the rise in the average age of marriage and a decline in the stigma of bearing a child out of wedlock (Cherlin, 1988). Paradoxically, then, teenage childbearing has come to be seen as a social problem in the United States over a period in which rates of childbearing among adolescents have actually declined. In Africa, as well, teenage childbearing is coming to be defined as a problem only as the age at marriage is rising and overall fertility rates among young women are declining. Certainly, we are not suggesting that the Botswana and Kenya cases are like the American case in all respects. Still, some of the same forces may be operating both in the United States and in Africa.

Group 2

Countries in Group 2, represented in Figure 2-1 by Uganda, show patterns similar to those in Group 1. In two of the three countries in this group, Zimbabwe and Liberia, the proportion of women who attended secondary school expanded rapidly. With respect to age at marriage and especially premarital births, the trends are less pronounced. The proportion marrying in the teen years has declined somewhat, and the proportion of respondents who have had a premarital birth rose moderately. For Group 2, then, the changes are less marked than those in Group 1 countries, but the analogy with the United States still may be useful.

Group 3

The data from the remaining six countries do not suggest the emergence of the kind of adolescent fertility pattern experienced in the United States—or even in Kenya or Senegal. The proportion of premarital births changed little, a stability paralleled, on the whole, for most of the other indicators except education. In Mali teenage marriage remains extremely common, secondary schooling is still negligible, and the very low proportion of women having premarital births shows no clear trend. This pattern of socially approved early marriage and childbearing is by no means restricted to rural areas. In urban Mali, DHS data show that 70 percent of women in each cohort had been married by age 17, and close to 40 percent had given birth by that age.

Including Nigeria in this group—or in any group—is problematic, given its large, heterogeneous population. Nonetheless, the aggregate data show a substantial increase in secondary schooling and some decline in teenage marriage, but little change in the proportion of women having premarital births, a figure which was already low. These patterns reveal an important lesson: Increases in schooling are not necessarily associated with more premarital births.

CONCLUSION

The diverse paths that these countries have taken manifest enormous variability in patterns of formation of marital unions and childbearing by teenagers. Nevertheless, there are some broad similarities. In most countries, enrollment in secondary school increased and age at marriage rose. The figures presented here suggest that these changes have created a longer period during which adolescent girls are sexually mature yet unmarried and pursuing education, an activity their societies consider incompatible with motherhood. More important, in most countries we observe a rise in the proportion of births occurring before a woman's first marital union, especially in urban areas. In some countries these increases were small; elsewhere they were substantial. Although the African and Western situations differ in key respects, these premarital births could be as great a problem for African girls as they are for girls in the United States.

Marriage: New Forms, New Ambiguities

Marriage is the demographic event most often used to estimate the time when regular sexual relations begin. In "natural fertility" populations, age at marriage is often a reliable determinant of when childbearing begins and of the number of children a woman will bear. But, although it may hold elsewhere, this relationship is quite tenuous in sub-Saharan Africa, in both rural and urban settings (see also Gyepi-Garbrah, 1985a).¹ Although we have presented evidence that suggests that the age at marriage is rising, understanding the economic and social dynamics of entry into marriage is essential to the study of adolescent fertility.

A key reason why age at marriage and entry into childbearing are so weakly linked stems from problems in defining marriage in Africa. Besides the fact that marital practices are extremely diverse, changes in ways of legitimizing unions and the rise of de facto forms of polygyny may be rendering even more fluid an institution that has long been recognized more as a process than as a discrete event. These definitional conundrums make it tempting to discard marriage as a meaningful link to entry into childbearing

¹A recent debate has centered on whether the age at marriage has increased or remained constant in Africa. Westoff (1992), who analyzed age at first marriage and age at first birth together, believes both are rising. Van de Walle (1993) argues that we will likely find the age at marriage unchanged if we take into account all the variations in survey questions and different types of union.

and to rely on variables such as age at first sexual activity or age at first cohabitation, as various surveys have done.

Yet we cannot dismiss the fact that the principal transformation in adolescent fertility that the new African surveys are identifying is not a change in fertility per se, but a rise in rates of childbearing among never-married women. This trend is our most promising entry into several issues that vitally concern young women: the use of contraception, abortion, and the prospects for continuing school after a pregnancy. Because many of the problems of adolescent fertility appear to rise from condemnation of what is seen as premarital childbearing, the question of what marriage is and when it begins cannot be laid aside.

This chapter shows that the ambiguities in marriage leave considerable room for disputing marital status. When young women have few alternatives to immediate marriage and childbearing, becoming pregnant at the outset of a union, whether or not it is called a marriage, is likely to be highly welcome. But nowadays, when a young woman has other opportunities for training or when her partner appears ambivalent about the union, the resulting changes in the perception of marriage cast a more dubious light on a woman's pregnancy.

"CUSTOMARY" MARRIAGE IN AFRICA

Despite extraordinary diversity across the continent, almost all African women marry, and they remarry quickly after divorce or widowhood (Smith et al., 1984). Women usually marry when they are comparatively young, from 16 to 18 years of age, and most women marry men substantially older than themselves. Besides these characteristics, dominant models of indigenous African marriage stress several key components. Three are noted below.

Bridewealth

Because most African societies value women's productive and reproductive potentials, men and their families are expected to pay money or goods to the woman's family. These "bridewealth" payments also confirm the legitimacy of a union and its progeny (Radcliffe-Brown, 1950). The nature and quantity of bridewealth payments vary enormously. In general, richer families are expected to pay more. But a woman's family might forgo bridewealth altogether in exchange for a set of wealthy, powerful in-laws. Alternatively, they may prefer a man of humble origins who cannot provide tangible wealth but would be willing to work for them for several years, usually at periods of peak labor demand.

Participation of Kin

If we can visualize African marriage as a logical extension of elders' investment in the young, then it should be no surprise that the marriages of youth often reflect the political and economic agendas of their elders. Among the Bangangte of Cameroon the marriage rights that older men hold in their daughters (and sometimes their nieces) are key elements of political power; they give men the means to forge alliances with the families of prospective husbands and thereby to create ties to both patrons and clients (Feldman-Savelsberg, 1989). Because marriage represents a union between kin groups, the children born to it belong as much to their kin groups as to their parents. The legitimate affiliation of children to a family—their father's in patrilineal societies, or their mother's in matrilineal societies—is a critically important step toward the perpetual renewal of such alliances.

Because marriage is as much a link between kin groups as it is a union of a husband and wife, families mark the union ritually. Along the coast of western Africa, families offer drinks and kola nuts as a significant celebratory feature of customary marriage a symbol of recognition by the families of the union. Examples come from the Akan of Ghana (Oppong, 1974), the Abutia Ewe of Togo (Verdon, 1983), the Anlo Ewe of Togo (Nakunya, 1969), the Creoles of Sierra Leone (Harrell-Bond, 1975) and the Ibo of Nigeria (Meek, 1937; Uchendu, 1965).

Given the political potentials of marriage, family elders are anxious to control when youth marry and whom they marry. Especially in the past, adolescent women were expected to acquiesce to marriages to virtual strangers that had been arranged in their childhood. Some alliances were even arranged before a child's birth. If a female was born, she would become the wife of the man with whom an alliance was sought; if a male was born, he would become a lifelong client. Families are still heavily involved, particularly in first marriages (see, for example, Landberg, 1986 for the Kigombe of Tanzania). Some young women are under such strict control that they have few areas of choice. For them, adolescence can be a very long stage in life, often one with no clear end. Paradoxically, only the poorest adolescents in Africa can be considered full decision makers with respect to their marriages: Only those bereft of kin must make their own decisions in adolescence.

Because kin groups see the marriages of the young as a way to create links to other groups, they have vested interests in conjugal stability. Like many other groups, Akan families in Ghana may call meetings in an effort to resolve serious differences between spouses (Oppong, 1980). In eastern Africa, according to Klima (1970), an unhappy Barabaig wife who sought refuge with her family might be returned forcibly to her husband.

Polygyny

One of the most distinctive features of marriage in Africa is polygyny, a phenomenon that has considerable bearing on marriage for adolescents. In many countries a rapid rate of population growth and a wide age gap between spouses create a large pool of women to marry a smaller number of older men, whose ranks have been thinned by mortality. Polygyny is an extremely heterogeneous institution. A farmer may have two wives; a chief, many. Within polygynous households, wives are differentiated as well. Temporal precedence is crucial: The senior wife handles the household's administrative and fiscal tasks, and delegates burdensome chores to junior wives, each of whom ranks above any succeeding ones. The senior wife is often in charge of monitoring the actions of the younger wives around other men, watching for signs of deviation from marital loyalty. Three other categories of wives are important: The first is the "official wife," required by an eminent urban man who must appear in official contexts with only one wife; she is generally the most educated, attractive, and cultured among his wives. Second, is the "beloved wife," who may receive better clothes, more money, and a separate house, and who may be seen more often in public with the husband. And third are the "outside" wives, who are not officially married to the man, may live elsewhere, and have more limited claims to his resources.

Political stature for a man often reflects the number of his wives and children, and a man who manages to marry more than one wife gains the possibility of numerous children. He also gains links offering political alliance and economic support with a wide range of families. Co-wives, if they are on good terms, share domestic chores and child care. Given a choice, however, most young women prefer monogamous marriage to gain greater leverage with their husbands and to liberate themselves from the work demands of domineering senior wives. Not surprisingly, as they grow older and gain junior wives of their own, their opinions of polygyny often improve.

Polygyny is more common in western Africa than in eastern or southern Africa, although about 15 to 30 percent of married men are polygynists in Kenya and Tanzania (Lesthaeghe et al., 1989). An estimated 50 percent of the Ashanti of Ghana practiced polygyny in 1945 (Fortes, 1954), and the proportion was estimated at 46 percent in the city of Ibadan in 1973 (Changing African Family Project, cited in Caldwell et al., 1989). Contrary to predictions that polygyny would inevitably disappear (see, for example, Goode, 1963), no overwhelming evidence points to its decline in the subcontinent.

TABLE 3-1 Percentage of Currently Married Women Aged 15-24 in Polygynous Unions, by Highest Level of Education Attained, Selected Sub-Saharan African Countries

Country ^d	Highest Level of Education Attained			All Women	Sample Size
	None	Primary	Secondary or Higher		
Burundi	5	7	^b	6	526
Ghana	35	17	20	23	764
Kenya	34	16	10	16	1,098
Liberia	39	30	13	34	1,035
Mali	35	24	^b	33	881
Nigeria	38	26	16	31	1,734
Senegal	32	26	24	31	1,060
Togo	44	36	32	40	676
Uganda	31	27	24	28	1,123

^dQuestions on polygyny were not included in the Demographic and Health Surveys in Botswana and Zimbabwe.

^bFewer than 25 cases.

SOURCE: Demographic and Health Surveys Standard Recode Files, weighted data.

despite the welter of legal and religious codes that colonial as well as modern states have created to curb it (Pison, 1986; Lesthaeghe et al., 1989).²

Table 3-1 presents recent Demographic and Health Survey (DHS) data on the prevalence of polygyny among young married women ages 15 to 24. Western African countries show comparatively high levels. In Liberia, Mali, Nigeria, Senegal, and Togo over 30 percent of currently married women in this age range are in polygynous unions. Young women with no education are much more likely to be married to polygynists than are those with secondary or higher education. The largest educational differences are found in Kenya, where 2.4 times more uneducated women are in polygynous unions than those with secondary or higher education.

Urban areas almost always report lower rates of polygyny than rural areas (Gaisie, 1975; Brown, 1981; Pison, 1986; Lesthaeghe et al., 1989), a differential usually explained by declining economic returns from wife-children units in urban areas (Caldwell, 1969). Certainly for adolescents, polygyny is lower among urban women, as Table 3-2 shows. Mali shows

²Southern African countries, however, may have seen such reductions (see Murray, 1981:151, on Lesotho; Comaroff and Roberts, 1977, and Gulbrandsen, 1986, on Botswana.)

TABLE 3-2 Percentage of Currently Married Women Aged 15-24 in Polygynous Unions, by Type of Residence, Selected Sub-Saharan African Countries

Country ^a	Type of Residence		Absolute Difference	Sample Size
	Urban	Rural		
Burundi	11	6	5	526
Ghana	20	25	-5	764
Kenya	15	17	-2	1,098
Liberia	27	37	-10	1,035
Mali	24	36	-12	881
Nigeria	25	33	-8	1,734
Senegal	25	33	-8	1,060
Togo	34	42	-8	676
Uganda	28	28	-0	1,123

^aQuestions on polygyny were not included in the Demographic and Health Surveys in Botswana and Zimbabwe.

SOURCE: Demographic and Health Surveys Standard Recode Files, weighted data.

the largest difference: 36 percent of young rural women are in polygynous marriages, compared with 24 percent of urban ones.

Polygyny affects male adolescents most directly through the age at first marriage. In societies where polygyny is widespread, few young men aged 15 to 24 have more than one wife. Because polygyny has a strong accumulative dynamic, young men must compete with powerful senior men for their age mates as wives (Pison, 1986).

For women, the situation is quite different. In highly polygynous societies young women are the targets of intense competition and are likely to be courted almost as soon as they reach puberty. The practice of polygyny means that in theory any woman of reproductive age can marry, regardless of the paucity of marriageable men. Though most women are in monogamous unions at any one point in time, at some point in their lives many of their husbands will have other wives as well (Pison, 1986; see also Goldman and Pebley, 1989, on the formal demographic underpinnings of polygyny). Although polygyny is not necessarily associated with a low age at first marriage for women, it is associated with greater age gaps between husbands and wives (Pison, 1988; Goldman and Pebley, 1989; Lesthaeghe et al., 1989).

Lesthaeghe et al. (1989) argue that kinship organization plays a role in determining levels of polygyny. Matriliney, for example, seems to be asso-

ciated with low levels of polygyny because families retain rights in their daughters, and men prefer not to have multiple groups of in-laws with whom they must deal. Because matriliney makes polygyny less desirable, matrilineal societies may also have a narrower age gap between spouses or an older age at marriage for women, or both. However, DHS results (not shown) suggest that once the age at marriage begins to rise, whether a group is matrilineal or patrilineal seems to make little difference in early childbearing.

Problems in Defining Customary Marriage

Marriage is generally considered the best indicator of exposure to the risk of childbearing. But in Africa, the tenuous link between these two events is partially attributable to measurement biases. Enumerators are more likely to code women who report that they are married as being older than those who report that they are unmarried (Lesthaeghe et al., 1989). Two other important factors make it difficult to analyze the relationship between age at first marriage and age at first birth: enormous variations in marital forms, and ambiguities in measuring the timing of marriage. That is not to imply that the rules defining marriage are themselves ambiguous. The legal aspects of the marriage process may be quite straightforward, and the expectations and the appropriate behavior of each party clearly defined. Rather, the measurement problem is that the multiple forms of marriage that exist in Africa, and the processual nature of marriage, make it difficult for researchers or even Africans to categorize people as being married or unmarried. Highlighting some social ambiguities surrounding the definition of marriage in Togo, Lecoq (1988) argues that we should be cautious in using the term "marriage" as a demographic concept:

Individuals living in identical situations may, in fact, describe their situations in quite different ways. A small business employee may boast that he has two wives (a sign, in certain circles, of economic status) while his manager . . . may declare himself to be monogamous, although he may in fact maintain two or three households. Alternatively, a young social service employee acknowledges that she is single, a status that ordinarily is anathema to a woman over the age of 20-25, but she adds that she "has a child" which redeems her status. A housewife in her neighborhood, in the same conjugal situation, might declare herself "married" because, for her, having a child with a man is sufficient grounds to be considered his wife. Even partners in the same union might describe their marital statuses differently: A woman might say that she is married to Mr. X while the man declares himself to be single. [translated from the original French version]

Variance in Marital Forms

Many African societies recognize a range of union types: those endorsed by legal/statutory ceremonies, consensual undertakings, and various religious or customary procedures. So, do observed variations in marriage rates have empirical bases, or do they simply reflect subgroup differences in how marriage is defined? "Village wives," secondary marriages, and woman-to-woman marriages, though extreme examples, illustrate the problem. Among the Lele of Zaire, a "village wife" was considered married to all the men of a particular age in the village. This was not a low status position and the children of the village wife were considered legitimate even though their biological fathers might never be known (Douglas, 1963). And, among the Higi and Bulai of northern Nigeria, and some groups of the Jos Plateau region of Nigeria, a woman maintained several marriages simultaneously, each of which was socially regarded as a legal marriage (Meek, 1931; Chalifoux, 1980; Sangree, 1980). And in Sudan a childless Nuer woman could assume a male role. She could make bridewealth payments for a young woman who then bore children on her behalf (Gough, 1971); the father of the children had no legal rights over them or their mother.

It is important to recognize that while these types of marriages are good illustrations of the flexibility of African marriage customs, either they represent minor themes in the marriage system of most African societies, or they are practiced by very small groups. However, faced with this multiplicity of marriage customs, many surveys in Africa have relied on the marital status women report, recognizing that different definitions of marriage can produce enormous variations in reports of age at first marriage.

To avoid definitional entanglements, most Demographic and Health Surveys and World Fertility Surveys (WFS) focused simply on the date when cohabitation began. (The exceptions were the Sudan Fertility Survey and the Senegal Demographic and Health Survey, which used the date of consummation.) The most obvious disadvantage of this strategy, of course, is the elimination of married couples who do not cohabit. Coresidence is often only one event among many in a long process of conjugal negotiations that may last for several years. Using it as the defining criterion of marriage poses special problems in areas with high rates of migration and levels of urbanization. In contemporary Lomé (Togo), Locoh (1988) observes, about 25 percent of currently married women do not live with their husbands, a pattern emerging especially among younger women whose husbands are polygamous. Etienne (1986) reports of the matrilineal Baulé of Côte d'Ivoire that many women maintain visiting relationships with their husbands and may not establish permanent coresidence until several children are born (see also Fortes, 1950, for the Ashanti; for patrilineal groups, see Salamone, 1986, for the Dukawa of Nigeria, and Comaroff and Roberts, 1981, for the Tswana of South Africa).

Even the cautious designation of marriage as a stable union involving cohabitation would make some unions that were reported as marriages in the surveys fail local tests of legitimacy such as celebration, kin recognition, or church or civil sanction. On the other hand, unions that the surveys did not report as "marriages" may have been quite legitimate in local views.

Because one definition of marriage cannot cover all circumstances, the choice of the starting point of marriage for purposes of comparison depends on the goal of the analysis. For the DHS and WFS, which ultimately sought to estimate fertility, using date of cohabitation may have been the best choice for a wide age range of women. For studying adolescents, however, the group in most conjugal flux, choosing any one measure such as cohabitation to define the start of marriage inevitably brushes over considerable variation.

Marriage as a Process

The wide array of union types makes it difficult to link fertility to the onset of marriage, a problem compounded by the processual nature of marriage in many African societies. Almost without exception, the WFS and DHS treated the beginning of marriage as a discrete event, and hence a person as either married or unmarried, a strategy that has obvious measurement advantages. Yet the boundaries between the two may be blurred in the many African societies that treat marriage as a process that evolves over months or even years through a sequence of events. These events may include the exchange of symbolic tokens, making installments on bridewealth payments, establishing a joint residence, or even the birth of a child (see, for example, Karanja, 1987, on the Yoruba of Nigeria; Harrell-Bond, 1975, on the Creoles of Sierra Leone). These events can best be seen as "conjugal testing," during which the partners and their families build mutual confidence by taking incremental steps toward a union. For young people, and young men in particular, access to authorized procreation, like access to other prerogatives of adulthood is achieved only gradually through demonstrating worthiness.

The processual nature of marriage poses obvious difficulties for distinguishing the end of an informal union from the beginning of a formal marriage (see Ngondo a Pitshandenge, 1988, on the difficulties this phenomenon entails for legal authorities). Identifying a general sequence of events that, once completed, confirms a legitimate marriage and establishes a definitive marriage date is one strategy for coping with this problem. The Côte d'Ivoire survey of 1980-1981 under the auspices of the WFS lends itself to this purpose. It identified three critical stages in the marital process: cohabitation, consummation, and celebration. Analyzing data from this survey, van de Walle and Meekers (1988) and Meekers (1992) found

the most common type of union to be a compressed sequence in which cohabitation, ceremony, and sexual relations with the first husband began within a month of each other, though ceremonies often came first. This type of marriage accounts for about 46 percent of all first marriages. In such marriages women's ages were quite low—from 13 to 14 years. Many of these marriages occurred among the Mandé Nord and African immigrant groups, both largely Islamic and patrilineal. By contrast, matrilineal groups, such as the Baulé and other Akan, and urbanized and literate women manifested another kind of sequence: "free unions," in Meekers' phrase, in which ceremonies followed sexual relations and cohabitation typically after a very long interval. Such marriages accounted for 22.2 percent of first unions. (Because surveys typically look at only one slice in time, it is difficult to appreciate that consensual unions often become stages toward more formalized ones. Using these same data, Brandon, 1990, found that 65 percent of all consensual unions are terminated or transformed by the fifth year; 42 percent become formal unions, and only 23 percent are dissolved.)

As these analyses suggest, it is difficult to find one reliable reference point from which to date all marriages. Different groups may attach quite different meanings to any one element of the process. Among the Ga of Accra, celebratory beverages may confirm the start of negotiations for a high-status marriage, the beginning of cohabitation, or the paternity for future children (Robertson, 1984.) As early as 1795, Afzelius (1967) reported that the Susoos of Sierra Leone used such drinks to cement the betrothal of unborn children. Further, the definition of marriage may change over time: Older cohorts may emphasize socially defined unions, whereas younger ones emphasize legal codes or religious ceremonies as criteria of legitimacy.

Regardless of the criteria used, a great deal is at stake in marriage—property, children, labor, and political alliances—and disputes frequently erupt over whether the conjugal sequence has actually been completed. If relations deteriorate between two families that are linked by a marriage, then heated arguments may ensue over whether the couple is really married. The money that the man's family previously handed over as bridewealth may suddenly be construed as payments on a past loan that need not be returned; and the food or drinks that were consumed together are now recalled not as marriage preliminaries but as casual tokens of hospitality. Finally, because the process of building a marriage can be so drawn out, the relationship may actually end before the completion of bridewealth payments or bride service. Disputes may arise afresh far into the future, especially when inheritance time arrives, about whether the marriage really occurred. (See Comaroff, 1980, and Comaroff and Roberts, 1977, for discussions of such complexities.)

The measurement difficulties that such *ex post facto* redefinitions pose

cannot be minimized. Awusabo-Asare (1988) found that in Ghana, unions that are dissolved after marriage payments are finalized are more likely to be reported retrospectively as marriages than those for which payments were not completed. And people are more likely to report unions that end as marriages than those that do not last (van de Walle, 1993). For a number of reasons, then, using fixed criteria to measure change in marriage, whether from retrospective or time-series data, is inherently fraught with problems.

EFFECTS OF AMBIGUOUS MARITAL STATUS ON LEGITIMATE REPRODUCTION

These difficulties in identifying and measuring marriage have obvious bearing on how births are perceived and counted. For analyses that assume that only one event in the process definitively determines a marriage, the proportion of births that might be defined as "premarital" varies according to which indicator of marriage is used. Analyses of the Côte d'Ivoire WFS reveal that 21 percent of first births would be defined as premarital if the date of celebration, that is, the exchange of drinks and kola nuts, is used to indicate the first union (van de Walle and Meekers, 1988; Meekers, 1992). These results are reported in Table 3-3. If the date of consummation, that is, sex with the man who eventually becomes the first husband, is used, then about 10 percent of all first births would be premarital; by using cohabitation, 17 percent would be premarital. The data from this survey show considerable variation even within Côte d'Ivoire. All three of the events among the Mandé Nord seem to give similar results: 11 percent of first

TABLE 3-3 Percentage of First Births Before Various Stages of the Marital Process in Côte d'Ivoire, by Ethnic Group

Ethnic Group	Stage of Marital Process			Sample Size
	Cohabitation	Celebration	Consummation	
Baulé	47	50	17	390
Other Akan	25	39	16	352
Krou	16	25	14	446
Mandé Nord	12	11	8	529
Mandé Sud	15	18	12	376
Voltaïque	10	14	7	400
Other African	8	9	6	1,013
All groups	17	21	10	3,506

NOTE: Excludes women in free unions.

SOURCE: van de Walle and Meekers (1988).

births would be premarital by using either cohabitation or celebration as indicators, and 8 percent by using consummation. Among the Baulé people, on the other hand, 17 percent of first births occurred before consummation of first marriage, 47 percent occurred before cohabitation, and 50 percent before celebration.

In the end it may be a mistake to force into a specific order all the events that collectively form a marriage and then single out one that marks the beginning. For a man, "legitimate" access to a partner and to reproduction depends less on rigidly following the prescribed cultural steps than by proving himself worthy—for example, by providing labor, goods, and political support to his family, which must be persuaded to provide bridewealth, and to potential in-laws, who seek a dutiful son-in-law. Because mutual testing between partners and their families is the basic agenda of the marriage process, the exchange of drinks, say, or the birth of a child may be the symbolic event that nudges the union further toward what the families eventually are willing to call a marriage; but it does not necessarily finalize the marriage. Instead, the meaning that a particular event takes on within the sequence depends largely on how the spouses and their families are getting along at the time.

If we accept this more fluid view of marriage, two critical points emerge. First, among groups that stretch out the marriage process, it is difficult to argue that marriage affects entry into childbearing rather than the reverse: It may be equally true that unions that are fertile are more likely to endure and thus end up being called marriages.

Second, that marriage is fluid in nature suggests that a "premarital" birth—one that precedes the conclusion of the marriage process—is by no means the same thing as an illegitimate birth. No one can deny the implications of legitimacy; but legitimacy refers less to a birth after marriage than to a man's willingness to assume the social and economic responsibilities of fatherhood. Hence if, in a patrilineal society, children are born to an unmarried woman, the man can usually claim them by compensating her family. In most cases, men are anxious to claim their children, and to maintain ties with them even if the union itself does not last. In Botswana, in the early 1970s, as many as one-third of households were headed by women (Peters, 1983:106); subsequent micro studies suggested that "a Tswana 'unmarried' woman is not necessarily out of touch with her children's father's family . . . not only with respect to material support but also to social recognition" (Peters, 1983; see also Kerven, 1984, and Peters, 1984). Even children whom a father temporarily rejects can be legitimized later, or they can be formally sponsored by someone other than the father.

Yet just as a premarital child is not illegitimate, marriage alone does not ensure a child's legitimacy. A married woman's child by an outside lover may have difficulty gaining paternal recognition. While the lover

may deny paternity to avoid adultery charges, the husband, if he is angry about the mother's indiscretion, may refuse to accept the child. Affiliation with the mother's family is possible, though rights as a full member under such conditions are uncertain.

If marriage is neither a necessary nor a sufficient condition of paternal legitimacy, then a premarital birth—if that is how we interpret a birth that occurs before the completion of the marriage process—is not necessarily an embarrassing case of illegitimacy. If the entire conjugal process is proceeding smoothly, one event leads to, and legitimizes, the next. Hence a birth to a young woman that occurs before her union is fully recognized may be a welcome event in the continuum toward a legitimate marriage. Only if the union is dissolved—or if the man dies before it is fully concluded, and inheritance is suddenly at stake—will questions of “legitimacy” likely arise.

In sum, although we might assume that one of the main functions of marriage in Africa is to confer recognized paternity on a child, the mother's marital status at the time of her delivery is at best a rough proxy for the child's standing in the family; still, it is the best we have. The rest of the chapter expands on these observations as we turn to consider recent changes in marriage.

CHANGES IN MARRIAGE IN CONTEMPORARY AFRICA

Vast changes in legal codes, educational opportunities, and avenues for employment, as well as the advent of new theologies, have not simplified the marriage process in Africa. Indeed, they have added elements that make it even more complex. In many countries, new forms of marriage are appearing, and we may be witnessing an even greater attenuation of the conjugal process. Although kin participation in youths' marriages seems to be ebbing, conjugal payments and polygyny seem to be taking subtle new forms. All these trends render even more difficult the analyst's task of determining the age at first marriage and its effect on reproduction. To document the outcomes, we examine several commonly discussed domains of change: economics, legislation, religion, education, and urbanization

Economics

In all societies, how to acquire the material resources to marry and support a family is a question of wide concern. The specific issue that concerns us here is how economic well-being affects the age at marriage in Africa. A key area of debate has been property dynamics: the relationships between land supply and population density. By far the most influential work on this topic is that of Boserup (1965, 1970, 1990). Until recently, Boserup contends, low population densities, male out-migration, and sub-

sistence agricultural methods were conducive to large family size in most of Africa (Boserup, 1990). Changes in these elements—constriction of the land base, combined with intensified requirements for permanent farming—eventually encourage people to have smaller families, through reducing polygynous marriage or the number of births per wife, so that they may pass on a viable farm to the next generation. The implication, of course, is that age at first marriage increases as well.

No one now disputes Boserup's main contention that population density and agricultural change measures interact in this general direction. But the mechanisms, strength of influence, time frame of change, and sequence of steps in the unfolding dynamic are all understudied for the African case. Lesthaeghe (1989a) argues that unlike the case of preindustrial Europe, the age of marriage in Africa was too low overall to function as a culturally recognized regulator of fertility. The vast majority of African agricultural societies had quite low population densities, so that there was no shortage of arable land and therefore people did not need to establish the appropriate age at first birth according to basic economic variables. Using WFS data from the late 1970s, Lesthaeghe et al. (1989) found that when literacy and polygyny were controlled, population pressure failed to produce significant effects on age at marriage.

DHS findings from Ondo State, Nigeria, and from western Kenya, two of the areas of highest population density in the subcontinent, suggest that the implications of population pressure for age at first marriage are far from clear. Even where we find an association between marriage age and population density, the causation may be unclear. Southern Nigerian societies have high ages at marriage; indeed, the women in the Yoruba population of Ondo State probably have the highest age of marriage for any African population in which childbearing typically begins after marriage: 20.2 years for women now 25 to 29 years old (Medical/Preventive Health Division, Ondo State and Institute for Resource Development, 1989). Yet we cannot rule out the effects of other factors on this high age at marriage. Southern Nigeria has very high rates of schooling for women and many opportunities for female occupational training and specialization in trade and the informal sector. If population density is a factor for Nigeria, therefore, it probably works through these occupational and education structures, rather than through land pressure per se. In western Kenya, DHS results for the densely populated Nyanza and Western provinces actually indicate *lower* median ages at first marriage and first birth for women ages 20-49 than are true for the rest of the country (Kenyan National Council for Population and Development and Institute for Resource Development, 1989). The social and cultural concomitants of the western Kenyan pattern are well known (for example, Hakansson, 1988): high rates of male out-migration for work on the railroads, high rates of polygyny in urban areas, maintenance of both urban and

rural residences, and rotation of wives and children through the various family homes and enterprises.

In sum, there is little support for the view that high population density in agricultural societies affects the age at marriage or childbearing for women in the way that Boserup's theory predicted, at least within the time frames for which we have evidence in contemporary Africa. Raising the age of marriage is only one method people can use to control the number of heirs to property. Even where increasing population density in agricultural societies does seem to be associated with a rising age of women at marriage or with lower fertility, the effect may be indirect: through an increase in occupational specialization for women that requires longer training or through a change in needs for youthful farm labor. Similarly, rather than curtailing fertility or resorting to celibacy or infanticide, which would drastically restrict their options if not breach cultural presumptions, people may try to thin out competing claims on property by drawing on methods of family control that are already in the cultural repertoire. Such methods may include marginalizing some women by declaring them undesirable to marry or defining specific children as ineligible for inheritance.

Apart from population density and the land base, the economic issue that looms large for age at marriage in Africa is the material resources that allow a young man to marry in a socially acceptable way. Young wage earners nowadays who obtain access to resources independently of family elders gain a significant advantage in choosing their own partners (Robertson, 1984). They also, of course, gain more resources to form temporary relationships with women who are not their wives.

Although many segments of society have abandoned bridewealth, strictly defined, other demands have sustained the high costs of marrying for a young man. Those by the woman's family usually include future help with food costs, court fees, medical treatment, and younger children's school fees. New expectations of financial support arise as fast as the economy changes. In one contemporary variant of child betrothal, a wealthy older man may be asked to educate a young girl who has been designated as his future wife (for southern Ghana, see Vellenga, 1986).

Although more economic freedom from elders gives young men more independent access to conjugal or sexual partners, many are expected to shoulder most, if not all, of their marriage expenses alone. As a result, mustering the resources to marry may take more time than in the past (Isiugo-Abanihe, 1988). Downturns in personal fortune, commodity prices, or employment may prolong the process (see, for example, Hollos and Leis, 1989.)

An extreme case of rising marriage costs is that of the Igbo in Nigeria. Isiugo-Abanihe (1988) reports that demands for exorbitant amounts of bridewealth mushroomed with the oil boom of the 1970s. Grooms were expected to buy televisions, radios, refrigerators, motorcycles, clothes, and trinkets for their

future in-laws. Some even had to buy a car or land or to build a house for their fathers-in-law. These incidental expenses represented steep financial outlays, often amounting to much more, even after accounting for inflation, than previous bridewealth amounts. Consequently, the age at marriage for both men and women has increased rapidly. For women who married in 1967 or before, 17 years was the mean age at marriage; among those who married after 1970, 24 years was the mean. Among men, the means were 26 years before and 32 years after 1970. Even among the uneducated, ages at marriage have increased substantially.

A factor related to the new economic barriers to marriage may be the monetization of bridewealth (see, for example, Ngubane, 1989; Comaroff and Comaroff, 1990). According to Nagashima (1989:190), among the Iteso in Kenya the transition from cattle to cash as bridewealth was instrumental in prolonging the marriage process, transforming it "from the traditional immediate payment to lengthy, piecemeal payments." To be sure, whether the marriage process is lengthened or shortened by changes in the financing may be related to social class. As cash began to replace cattle as bridewealth among the Giriama in southeastern Kenya, wealthy parents began to shorten the time of payment because they wanted cash as investment capital to buy land and plant tree crops (Parkin, 1972). Parkin's findings suggest that when bridewealth is high, poorer people may take longer to pay it, both because the payer is too poor to acquire the extra amount and because the receiver is more anxious to secure income than capital.

In considering the effects of economic forces on marriage, the case of labor migration in southern Africa looms large, whether we view it as a response to shrinking land supply or to scarce bridewealth resources. Gulbrandsen (1986) and Murray (1980, 1981), among many others, argue that the combination of abandonment of polygyny and circular labor migration to South Africa has profoundly transformed the entire regional system of marriage and family relations. Because of the long absences of men, many relationships never culminate in a marriage, or do so very late, and thus lead to a large number of births that we would count as nonmarital. In their prime working years, young men typically migrate for work most of the year. During their brief visits home, they strike up temporary relationships with women who are left behind to maintain the farms. Because a young man must still pay bridewealth to marry legally, his parents, who are taking care of their daughters—and their daughters' children—may actually discourage him from marrying in order to retain greater control over his earnings (see also Izzard, 1985). The result is not surprising, as Gulbrandsen (1986:17) explains:

Since more men than women move to the urban areas in Botswana, and since a man may marry anyone who is younger than himself, while a woman, correspondingly, has to be engaged by an older partner, there is

always a "surplus" of marriageable women in the village. In fact, precisely because of the unilateral relationship of age in combination with monogamy, the pool of marriageable women increases as men grow older while, for women, the "supply" of marriageable men declines.

Upon their retirement in middle age, male migrants are anxious to marry and set up a home independently of their parents. They tend to marry women already in their thirties with several children. Some men are reluctant to support a predecessor's children, but others are happy to acquire children, who constitute potential resources.

As for women, those who marry and move into their husbands' compounds report tensions with in-laws, with whom they compete for their husbands' support. Unmarried women who bear children by usually absent partners may remain as dependent members of poor households that are maintained by parents and brothers (later by sons) or head their own small impoverished households. Needing to support their children, they may also begin to migrate periodically to the city to look for work, leaving their children with their mothers (Bryant, 1977).

Through this complicated picture of marriage and fertility in southern Africa, the fact that stands out is that for much of the region, the demands and opportunities created by massive labor migration are making childbearing—and even childrearing—largely independent of marriage. The resulting gap between physiological maturity and economic viability, especially for men, likely extends the period in which any children they father are likely to be born in "premarital" unions.

New Legislation

New legal codes have aimed to supplant the family with the state as the institution granting legal status to marriages (see, for example, Meekers, 1990, for Côte d'Ivoire). They have also sought to shift the definition of marriage from an alliance between two families to the basis of a new conjugal family. Such measures, according to predictions by authors such as Goode (1963:202), would "become forces in their own right, supporting the emergence of new family systems." They have also aimed to create greater scope for individuals to make their own partner choices. During the colonial period, countries such as Nigeria took legislative measures against unwanted arranged marriages primarily by establishing a minimum legal age at marriage and abolishing child marriage for girls (Omideyi, 1983; Segamba et al., 1988). Since independence many African countries themselves have sought to liberalize laws to accommodate a wider range of marriages such as legal/statutory, religious, and consensual arrangements. Nowadays, the minimum age of marriage and the conditions of consent are set out in the legal codes of a number of countries. As Table 3-4 reveals, the legal

TABLE 3-4 Minimum Legal Age at Marriage,
Selected Sub-Saharan African Countries

Country and Year Reported	Age of Groom	Age of Bride
Cameroon, 1980	18	15
Côte d'Ivoire, 1982	21	18
Ethiopia	18-20	12-15
Gabon, 1979	18	15
Ghana ^a , 1979	0-21	0-21
Guinea, 1979	18	17
Kenya ^a , 1979	15-18	9-18
Lesotho, 1980	18	16
Liberia, 1980	16	16
Madagascar, 1979	17	14
Mali ^b , 1980	18	15
Niger, 1979	18	16
Nigeria ^a , 1979	9-16	9-16
Senegal, 1980	20	16
Somalia, 1980	n.a. ^c	16
Swaziland, 1980	18	16
Uganda, 1980	18	16
Tanzania, 1980	18	16
Zambia, 1979	16	16

NOTE: Even at the legal age, young people may require parental or judicial consent.

^aVaries according to major administrative divisions and religious or ethnic groups.

^bThe minimum age for women has since been raised to 18 years.

^cn.a. = not available.

SOURCE: United Nations (1989:Table 7, pp. 42-43).

minimum age of marriage for women varies enormously according to major administrative divisions, or religious or ethnic groups. Some countries have established a range of ages: from no minimum in some areas to 21 in other areas of Ghana, 9 to 18 years in Kenya, and 9 to 16 years in Nigeria and Côte d'Ivoire.

Practices such as polygyny and bridewealth have also been the targets of reform in some African governments (see Ngondo a Pitshandenge, 1988, for a general review). Objecting to what they perceived as the sale of women, colonial authorities often attempted to discourage if not to abolish bridewealth practices (Phillips and Morris, 1971). However, efforts to broaden the scope of allowable marriages, rather than constrict choices, have been among the most successful of legal initiatives. People nowadays marry under many different religious and civil arrangements. On the whole, how-

ever, customary marriage processes still predominate. In Côte d'Ivoire in 1980-1981, for example, fewer than 2 percent of women in formalized first unions were in civil unions; the rest entered marriage through customary marital procedures (Meekers, 1992). Even among the educated, Western marital procedures have not completely supplanted customary practices. An analysis of the postenumeration survey of the Ghana 1960 census (Tetteh, 1967) revealed that most couples who had a church or civil wedding did so after carrying out the customary rites (see also Crabtree, 1950; and Oppong, 1974). These findings suggest that a civil ceremony may be the final stage in a sequence of marital events among the educated.

Despite the ideals that these laws aimed to achieve, reality has often been quite different. Though legal measures have suppressed most outright efforts to betroth infants or small girls, ages at marriage are still quite low in some countries. Part of the problem lies in the difficulty of enforcing laws on marital age in countries where few people actually know their ages, and where a marriage does not need to be reported to the authorities unless it is accompanied by a civil or religious ceremony. Another obstacle is the very strong influence that religion exerts in some countries. The tenets of Islam in particular pressure families to ensure their daughters' purity by marrying them when they are young. Moreover, many countries recognize the legitimacy of several legal systems governing marriage: Ghana recognizes customary, Islamic, Christian, and ordinance unions (Pool, 1972); and Sierra Leone recognizes customary, statutory (including Christian), and Islamic marriages (Harrell-Bond, 1975). The ages at which marriage is permissible under different guidelines may vary markedly, even for the same country. The fact that many countries set out a range of minimum ages rather than a single age implies that compromises had to be struck to accommodate diverse, potentially contradictory marriage practices.

Another reason why reality does not always correspond with legally stipulated marital ages is that countries frequently provide for overruling laws regarding marriage and for abrogating the consent of the partners. To take the example of the Zaire code of 1985, the minimum age of marriage for men is 18 and for women 15; "however, the conciliation court may for serious reasons be legally empowered to grant a waiver of the age limit. The court shall decide on such a request by *any person* who justifies the need for a waiver" [clause 352, emphasis supplied] (Annual Review of Population Law, 1985). The new Rwanda code of 1988 is similar. The minimum age of marriage is set very high, at 21 for both parties, but the code provides that this requirement can be set aside "for serious reasons" (Annual Review of Population Law, 1988). In countries with no national legislation on minimum age, the question is left to the customary courts. Yet the legal framework in one such country, Niger, expresses a situation that applies implicitly even in countries with formal laws: "The consent of

the spouses is not considered as one of the essential conditions for the validity of the marriage, especially when it is the first marriage of a boy or girl living under paternal authority. The marriage is decided upon by the heads of the two families" (Knapp, 1979:N-48). In Nigeria a valid customary marriage is based explicitly on the premise that "[t]he actual contracting parties were the parents, not the intended spouses, which is traditional under Nigerian customary law" (Annual Review of Population Law, 1981:82).

For one reason or another, legal attempts to bar early marriage often fail. According to the Cameroon Fertility Survey of 1978, part of the World Fertility Survey, 8 percent of urban women and 25 percent of rural women were married before the minimum legal age of 15 years (United Nations, 1989). And although the minimum age in Côte d'Ivoire is 18 years, data from the WFS of 1980-1981 showed that 40.9 percent of urban women and 42.6 percent of rural women were married before 18. In Senegal, where the minimum legal age is 16 years, the WFS of 1978 revealed that 15.5 percent of urban women and 35.6 percent of rural women first married before age 15 (United Nations, 1989).

Attempts to suppress bridewealth have been almost as unsuccessful as efforts to regulate the age at marriage. For example, among the Iteso of Kenya, Nagashima (1989) reports, the girl's family now demands cash as compensation for the costs of educating her and for the loss of her income. Even where the amount of bridewealth has declined, it would be difficult to separate the effects of legal sanction from bridegrooms' economic hardship. And if families fear legal retribution for demanding bridewealth, increasing expectations that suitors will pay a girl's school fees or initiation expenses may stem from families' efforts to disguise outright bridewealth.

As for polygyny, legal measures seem to have had little direct effect. For example, although Côte d'Ivoire abolished polygyny in 1954, data from the WFS of 1980-1981 disclosed that about 43 percent of currently married women aged 15-19 were in polygynous unions (Direction de la Statistique, 1984). Western Africa shows the least decline in polygyny. The overall incidence of polygyny in Ghana remained virtually unchanged between the 1960 and 1970 censuses; indeed, it rose in each educational category over the decade (Aryee and Gaisie, 1981). Yet, just as legal measures may have converted bridewealth payments into more legally acceptable forms, a similar generalization seems applicable to the outcome of legislation on polygyny. Even though the practice of having more than one legal wife at a time may have declined, particularly in urban areas, some researchers claim that it has been replaced by new types of union formed between women and already married men (van de Walle and Kekovole, 1984; Clignet, 1987; Lacombe, 1987). Lacking the social recognition that is usually accorded to civil or even to customary unions, these new unions have been labeled "outside" marriages (Baker and Bird, 1959; Harrell-Bond, 1975; Karanja,

1987), "informal arrangements" (Pellow, 1977), and in francophone countries, *le deuxième bureau* (Lacombe, 1983).

For Botswana, although there may be some problems with the data, there is some evidence that new legal measures concerning access to property and credit underlie some part of the country's very low rates of marriage among adolescent women as documented in the recent DHS. (The importance of these rights, in fact, may suggest that one reason for these low rates was that young women were quite anxious to report to the DHS interviewers that they were unmarried.)

To be sure, education may be playing some role in the rising age at marriage. Indeed, Botswana is one of the few African countries where females outnumber males in secondary school (World Bank, 1988). Although, according to Gulbrandsen (1986:21), educated women may be choosing to remain single "rather than being beaten by a foolish, illiterate husband," women may simply be educating themselves out of the marriage market. But female education is rising in several southern African countries, and marriage rates have declined more sharply in Botswana than in many of its neighbors. Little research directly addresses this contrast; but a key difference in Botswana with respect to property rights, documented by Larsson (1992), suggests that legal changes in other domains may affect marriage profoundly. Whereas in most other southern African countries women must marry in order to obtain access to property, in Botswana unmarried women have the same legal rights to property, credit, and business rights as do married men. This legal advantage, conferred after independence in 1966, benefits rural women with respect to rights in farm land; it also helps urban women who seek to acquire plots to build or to buy houses for rental income or self-employment activities. Larsson (1992:10) argues that

... single women aim at becoming plot-holders in self-help housing areas. The very large number of unmarried women living in their own houses can perhaps be interpreted as the result of a very conscious strategy: to run their lives through the support of "my own house" rather than through the unsure support of a husband.

The key point is that only *unmarried* women in Botswana have these extraordinary rights. Married women, by contrast, are subject to the husband's authority in property matters concerning land and housing. Moreover, they cannot obtain loans without the husband's permission, nor can they lodge court complaints. Unlike women in countries such as Zimbabwe and Zambia, unmarried women in Botswana, though their rights to land and property are by no means consistently enforced, have more legal leverage if they try to press claims (Hansen and Ashbaugh, 1991). By contrast to women in other southern African countries, then, Botswana women have more options to fall back on if they do not wish to marry particular men. Many appear to see delaying or even forgoing marriage as their best route to security.

Religion: Islam and Christianity

What are the effects of new religions on the age of women at marriage and on premarital fertility?³ On the whole, Islamic societies have lower levels of female education and ages at marriage for women than those with Christian majorities (Lesthaeghe et al., 1989). (For men, the age at marriage varies widely among ethnic groups that practice Islam, from very high among the Hausa to fairly low among the Swahili.) Because of their intense concern with female purity, Islamic groups try to ensure that most births occur within the bounds of marriage by compressing the gap between physiological maturation and marriage; indeed, they sometimes reverse the order. Lesthaeghe et al. (1989) point out that very young ages of marriage for women produce low overall rates of premarital fertility. Whether the cause stems from efforts to place tight controls on women's reproduction (for example, J. Goody, 1973) or from Islamic doctrine per se, Muslims are less likely than Christians in the same country to report having had a premarital birth (see Table 3-5).

Yet we cannot assume that religious doctrine itself systematically produces these patterns or even that they hold consistently. One exception to the usual Islamic patterning of marriage, sexuality, and fertility among young women appears among the Twareg camel herders and traders in the Sahara (Worley, 1991). Though devout Muslims, they differ markedly from other African Muslim populations in the freedom of sexual action they accord women, especially those from high-status families. The marriage process lasts a considerable time. The groom takes a year or two to amass wedding gifts, less for the parents, the typical pattern, than for the bride. The bride may even decide that she needs another year or more before separating from her kin. Even then, marriage does not immediately result in cohabitation because "[t]he parents want to be sure that her husband appreciates her and shows her respect" (Worley, 1991:331). During the first two or three years of marriage, "[b]oth sexes may have many affairs . . ." (Worley, 1991:333). Wives eventually bear highly valued children in whom they retain rights in case of divorce.

More systematic research might use such variations to ask how Islam is related to adolescent reproductive behavior. Influences could stem from (1) religious convictions deriving from various schools of Islamic law, (2) patterns that predate the advent of Islam, or (3) a tendency of Muslims to assimilate regional norms into their marital patterns. In Nigeria, DHS data on age at first marriage by religion support the thesis that differences be-

³For treatments of fertility with respect to indigenous religions, see, for example, Fortes (1978), Caldwell and Caldwell (1987), and Lesthaeghe et al. (1989).

TABLE 3-5 Percentage of Women Aged 20-49 Who Had a Premarital Birth, by Religion, Selected Sub-Saharan African Countries

Country	Christian (1)	Muslim (2)	Difference (percentage points) (1 - 2)	Sample Size
Ghana	7	4	3	3,639
Kenya	21	13	8	5,652
Liberia	25	10	15	4,102
Mali	7	5	2	2,676
Nigeria	11	6	5	7,169
Senegal	21	7	14	3,440
Togo	17	12	5	2,636
Uganda	12	10	2	3,573

SOURCE: Demographic and Health Surveys Standard Recode Files, weighted data.

tween Muslim and non-Muslim populations in the same province may be small, perhaps because the conservative nature of predominantly Muslim areas affects ages at marriage of both populations. In Ondo State, for example, ages at first marriage for Muslim and Protestant women aged 25-29 are almost identical at 19.7 and 19.8 years, respectively (Medical/Preventive Health Division, Ondo State and Institute for Resource Development, 1989).

Ages at marriage in predominantly Christian societies are generally higher, perhaps because of their greater emphasis on formal schooling and on monogamy. Yet a widespread perception in Africa is that many of these religious injunctions have had perverse effects, producing a large number of premarital births. One explanation blames Christian tenets themselves, in particular, the insistence that followers be monogamous and abandon practices such as female circumcision, widow inheritance, bridewealth, and partial sexual relations (*ngweko*) for the unmarried (see, for example, Kenya:ta, 1971; Ahlberg, 1991). Yet in a wider social context that permits and even values polygyny, some men may have responded to injunctions to be monogamous by marrying one woman in the church while simultaneously taking on "outside" wives (see, for example, Mann, 1985; Karanja, 1987) or becoming "sugar daddies" to young mistresses (Dinan, 1983). Some observers argue that Christianity's demand to delay sexual relations until marriage means that young men in eastern Africa are no longer taught traditional methods of sexual play without risking pregnancy; as a result most proceed with full sexual relations rather than abstaining completely. As

early as 1936 Krige pointed to evidence of inconsistencies between ideal norms and practical reality in southern Africa:

. . . [t]he Skoolplaas Lutheran Church registrations over a period of four years (1931-1934) show that 60 per cent of the brides were known by the pastor to be women with children [Krige, 1936:5].

It is quite difficult to muster convincing evidence about either the effectiveness of the older, indigenous checks on adolescent fertility or Christianity's effects in suppressing them. In some countries Christian mission activity may well have been responsible for the erosion of indigenous controls over unsanctioned adolescent sexuality and fertility. But if it has, then areas with numerous Christian adherents should have the highest rates of nonsanctioned adolescent sexuality and reproduction. The new DHS results point to a counterexample: Burundi.

Burundi is heavily influenced by Christianity: 68 percent of all women enumerated in the 1979 census were Catholic and 8 percent were Protestant (Segamba et al., 1988). Whether Christianity or some other factor is the cause, Burundi has minimal reported polygyny (10 percent of women; Segamba et al., 1988). Although very few women have any secondary education, the country has a relatively high age at marriage for women (see Table 2-7). Even so, few women report having had a premarital birth (see Table 2-10), and fewer reported premarital sexuality than in any other country except Mali (see discussion below concerning Table 3-7). The case of Burundi therefore does not support the hypothesis that Christianity inevitably erodes controls on adolescent sexuality. (It is worth pointing out that Burundi is in a sense a subpopulation because of its small size. Similar anomalies would undoubtedly surface elsewhere by examining more within-country variations.)

Although Christianity's influence over marital and premarital moral conduct is variable, Christianity may have had a stronger, though more subtle and possibly unintended, influence on children's legitimacy than on marriage itself. A study by Mann (1985, 1988) of nineteenth-century elite families in Lagos, Nigeria, provides important evidence that supports this hypothesis. Mann points out that Europeans in Lagos

. . . taught that Christian marriage united two individuals, not two lineages, and that it should be based on love and companionship Europeans [also] assumed that marriage formed a conjugal estate and created an identity of interests between spouses. Husbands and wives toiled dutifully in their separate spheres for the welfare of the elementary family, neither for themselves alone nor for their kin groups [Mann, 1985:44, 46].

These domestic values translated into clear economic and legal stipulations. Christian marriages were to form conjugal property estates, whereby a man shared his income during life, and his inheritance at death, with his

wife and their children, not with his siblings and their children, as local Yoruba culture dictated (Mann, 1985). According to local culture, a man acquired children by securing reproductive rights in a wife; but he could also legally acquire his illegitimate children by compensating his lover's family or husband. Through its unyielding insistence on monogamy and on marriage as a bond between husband and wife, Christianity undermined an "outside" child's legitimate link to a paternal kin group. A man's children who were born to an "outside" wife were necessarily illegitimate, regardless of the man's willingness to recognize them.

Education

The spread of education is a singularly important change affecting marriage in Africa. In many regions of the Third World, including sub-Saharan Africa, higher levels of education and literacy of women are associated with higher ages at first marriage (Casterline and Trussell, 1980; McCarthy, 1982; McDonald, 1985; Trussell and Reinis, 1989). In the WFS, the median age at first marriage for women under age 25 increases as one moves from illiteracy to full primary education, from one year in Benin to over three years in Cameroon, Senegal, and Nigeria (Lesthaeghe et al., 1989). Because formal education, more than almost any other innovation, appears to postpone or attenuate the marriage process, it creates a potential for interpreting pregnancies as "premarital."

Table 3-6 demonstrates that the more education a woman has, the later she will marry; women aged 20-24 with no education were about twice as likely to be married in their teenage years as those with secondary or higher education. The table also suggests that there are different thresholds at which education affects the propensity to marry as a teenager. In eight out of our eleven countries, the likelihood of teenage marriage differs little between uneducated women and those with primary schooling, so that it appears to be secondary or higher education that significantly defers marriage (see also Westoff, 1992). These results may have changed considerably from 40 or 50 years ago, when primary education was such an innovation for women and when children often did not enter school until age 10 or 12. Women with primary schooling thus may have married much later than those with no education.

Greater education is also generally associated with more reported premarital sexual activity, as Table 3-7 shows. Exceptions include Ghana and Mali, with little differences in premarital activity between uneducated women and those with primary schooling, and Botswana and Kenya, with little difference between women with primary and with secondary education. Ondo State, Nigeria, may comprise another important exception to the education/premarital sexual activity link, although the connection is by inference from

TABLE 3-6 Percentage of Women Aged 20-24 Who Married Under Age 20, by Highest Level of Education Attained, Selected Sub-Saharan African Countries

Country	Highest Level of Education Attained			All Women	Sample Size
	None	Primary	Secondary or Higher		
Botswana	30	20	12	19	926
Burundi	46	41	22	44	779
Ghana	74	63	30	63	867
Kenya	82	60	32	52	1,320
Liberia	75	71	42	64	1,030
Mali	93	89	"	92	530
Nigeria	92	69	33	68	1,676
Senegal	82	47	28	70	895
Togo	80	59	29	63	661
Uganda	83	76	40	73	985
Zimbabwe	85	76	30	53	840

"Fewer than 25 cases.

SOURCE: Demographic and Health Surveys Standard Recode Files, weighted data.

TABLE 3-7 Percentage of Women Aged 20-24 Who Engaged in Premarital Sex During Their Teenage Years, by Highest Level of Education Attained, Selected Sub-Saharan African Countries

Country	Highest Level of Education Attained			All Women	Sample Size
	None	Primary	Secondary or Higher		
Botswana	67	81	85	80	924
Burundi	38	44	56	40	779
Ghana	62	65	74	65	867
Kenya	47	66	73	67	1,315
Liberia	61	67	81	68	1,009
Mali	15	14	"	15	527
Nigeria	8	21	39	18	1,357
Togo	65	70	89	71	661
Uganda	51	61	75	60	985
Zimbabwe	42	49	59	53	837

"Fewer than 25 cases.

SOURCE: Demographic and Health Surveys Standard Recode Files, weighted data.

low levels of premarital births. (Whereas most regional anomalies are obscured in nationally representative surveys, Ondo State merits special attention because its population is larger than some of the national populations considered in this report.) Ondo State, despite its relatively high levels of female secondary education, has very low levels of premarital fertility. Whether those levels are achieved through abstention, or by the use of contraceptives, or both is unclear (Caldwell et al., 1992, argue for the second for the Ekiti District).

High levels of education appear to be associated with greater prevalence of "outside marriages" as well as with more premarital sexual activity. From a woman's point of view, education and formal polygyny mix poorly. Karanja (1987) points out that young educated women are less eager to be polygynous wives: they resent becoming junior wives to women with less education or even senior wives in polygynous marriages (see also Brandon and Bledsoe, 1988). Because highly educated women face a marriage market restricted to potential partners who are as educated as themselves, they often prefer unsanctioned relationships with older men of wealth, hoping that their roles as "outside wives" will help them advance into higher social echelons.

Urbanization

Urban-rural differences in the probability of teenage marriage present a potentially crucial dimension of change. DHS data show that in Kenya and Mali, whether they lived in urban or rural areas made relatively little difference in the likelihood that women had married before they were 20. (This finding is based on the responses of women aged 20-24 at the time of the surveys.) In Botswana and Burundi, rural women were actually less likely to marry as teens than their urban counterparts, but again the differences are small (Table 3-8). For most DHS countries, however, the demands and opportunities of urban life appear to have substantially delayed marriage among adolescents. Once again, inferences about causal direction should be drawn carefully. When rural youth with prospects for employment or education in the city leave the countryside their departure effectively raises the ages of urban marriage and lowers those in the rural areas (see also Findley and Williams, 1991).

Although place of residence is strongly associated with age at marriage, its association with premarital sexual activity is much less clear (see Table 3-9). In Burundi, Liberia, Nigeria, and Uganda young urban women were much more likely to have engaged in premarital sex than rural women. In Ghana, Kenya, Mali, Togo, and Zimbabwe the differences are small. Botswana actually has substantially higher rates of premarital sexual activity in rural areas. This anomaly may simply reflect the extraordinarily long periods

TABLE 3-8 Percentage of Women Aged 20-24 Who Married Under Age 20, by Place of Residence, Selected Sub-Saharan African Countries

Country	Type of Residence		Absolute Difference (percentage points) (1 - 2)	Sample Size
	Urban (1)	Rural (2)		
Botswana	22	17	5	926
Burundi	51	44	7	779
Ghana	54	68	-14	867
Kenya	47	53	-6	1,321
Liberia	52	75	-24	1,030
Mali	87	94	-7	530
Nigeria	75	90	-15	1,312
Senegal	49	86	-37	895
Togo	45	75	-30	661
Uganda	55	76	-20	985
Zimbabwe	75	58	-17	840

SOURCE: Demographic and Health Surveys Standard Recode Files, weighted data.

TABLE 3-9 Percentage of Women Aged 20-24 Who Engaged in Premarital Sex During Their Teenage Years, by Place of Residence

Country ^d	Type of Residence		Absolute Difference (percentage points) (1 - 2)	Sample Size
	Urban (1)	Rural (2)		
Botswana	77	81	-4	924
Burundi	55	39	16	779
Ghana	66	64	2	867
Kenya	69	66	3	1,316
Liberia	75	62	13	1,009
Mali	16	14	2	527
Nigeria	35	14	21	1,357
Togo	76	68	8	661
Uganda	77	58	19	985
Zimbabwe	57	51	6	837

^dUnmarried Senegalese women were not asked about sexual experience.

SOURCE: Demographic and Health Surveys Standard Recode Files, weighted data.

during which many of Botswana's rural women now remain unmarried, as we pointed out earlier.

The variability in the urban-rural differences from one country to another, as important as they are, suggests that African cities differ so much in their occupational structures and residence patterns that they do not constitute a unitary social phenomenon, and therefore do not have a uniform, predictable impact on behavior patterns such as fertility rates.

EFFECT OF THESE CHANGES ON MARRIAGE

How these forces of economics, law, religion, formal education, and urbanization affect adolescent sexuality and childbearing in Africa is not easy to sort out. Nevertheless, we can offer a few general observations.

The constant incorporation of new symbols that legitimize marriage and the invocation of new legal and religious codes deepen the inherent ambiguities in marital status. They also create more potential for drawing out the marriage process and for testing out multiple partners before marriage. (Unfortunately, we cannot reliably ascertain whether marriage has indeed become a more attenuated process than in past generations; see also van de Walle, 1993).

Another major trend has been the diminution of gerontocratic control over marriage (see, for example, Robertson, 1984), leading to growing autonomy in the choice of partner, especially among educated urban families (Omideyi, 1983; Lesthaeghe et al., 1989; see also La Fontaine, 1972, and E. Goody, 1973, among many others, for changes in rural areas). The results of the Togo DHS substantiate this point. It asked, "For your last union, was your husband chosen by your family, you yourself with the advice of your family, or you yourself without the advice of your family?" Of women in their first unions, 27 percent of those aged 20-24 reported that their families alone chose their husbands; while among the 45- to 49-year-olds, 46 percent reported that their families chose their husbands. Analogous patterns emerge when women are grouped by residence and education. Among rural women, 38 percent said their families chose their husbands, compared with only 14 percent of urban residents. And among women with no education, 40 percent said their families chose their husbands, compared with only 14 percent of women with some education.

Predictably, many people point to the demise of elders' authority as the root of modern evils, especially the rise of what they see as moral degeneration among the young. Yet from the perspective of young women who do not want to grow up to find their conjugal futures were decided long ago in their childhood, this aspect of the demise of elders' authority is a decided improvement.

One of the frequently noted concomitants of elders' loss of control over marriages is an apparent decline in full-scale marriages and an associated rise of consensual unions (see E. Goody, 1973; Bleek, 1978; and Robertson, 1984 for Ghana; Southwold, 1973, for Uganda; La Fontaine, 1972, for the Gisu of the Kenya-Uganda border; Etienne, 1986, for the Baulé of Côte d'Ivoire; and Meekers, 1992, for Togo). Once again, it is difficult to verify this trend: people may be more likely to label a union as unofficial if it has not been mediated by elders.

Closely related to the rise of consensual unions is the dramatic and controversial transformation in polygyny. Karanja (1987) argues that low-status women can achieve social mobility by becoming "outside wives" of elite men (see also Mann, 1985). Other studies, however, point to the inequality inherent between the legally married wife and the outside wife, and to the consequent inequalities among their children.

Whatever their effects on women individually, factors such as education, Christian ideals of monogamy, and aspirations to social mobility have powerful effects on the market for formal marriage in Africa. They limit the pool of appropriate partners for high-status women to those men who are educated, affluent, and unmarried, and they tempt women to delay entry into formal union in hopes of better matches.

To better understand the social dynamics that foster these demographic outcomes, we need to depart temporarily from the search for precise categories and measurements, and squarely confront the ambiguous nature of conjugal unions under conditions of sweeping change. Looking at transformations in this light suggests that women may be construing their marital statuses according to the expectations of prestigious groups. In Freetown, Sierra Leone, uneducated women are likely to report themselves fully married after customary marriage rites have been performed. But better-educated women are more likely to report being single or "engaged" if they have had no civil or religious ceremony. This observation, if accurate, implies that to these women defining a union as "nonmarital" is preferable to admitting being in a customary union (Brandon and Bledsoe, 1988), a strategy that may help women with aspirations for elite status to disassociate themselves from polygyny.

A man facing economic and social pressures can initiate several potential conjugal links, but minimize his costs by eventually selecting a principal wife—usually the one with the most education or the most prestigious family connections—and marginalizing the rest as outside wives who lack full legal status under modern statutory or ordinance codes (see also Mann, 1985). The outside or country wife tends to live in a more rural area or a poorer neighborhood, and her children go to less prestigious schools.

In the past, even formal co-wives were never perfectly equal. Yet factors such as education appear to be exacerbating inequities among out-

side wives and their respective children. The status of such women and the children they bear is often murky (Phillips and Morris, 1971; Vellenga, 1986). Elite men can use this ambiguity in court cases either to deny the responsibilities associated with paternity or to sue other men for "adultery" damages.

Western Kenya presents an archetypal case of the combined dynamic of ranking and marginalization, whereby some low-status women are demoted in multiple-partner unions and others are kept in a remote holding pattern of the marriage process. Hakansson's (1988) work shows that educated and better-connected men are investing heavily in high-status marriages both because they can control their wives' cash income and because of the powerful affinal networks they can tap. High-status women and their children likely fare quite well, but lower-status women confront increasingly dire prospects because of land shortages. The still-extant colonial "customary law" ensures women's rights in land only in the context of bridewealth marriage. Lacking acreage that is considered sufficient to support a large family, most men contract legal marriage to only one wife at a time. They delay legal marriage but strike up temporary relationships with women for domestic services and personal comfort. A poor woman is caught in a bind: Lacking alternatives, she must establish a much-needed relationship with a man, but runs the risk of being sloughed off, destitute, in the competition over diminishing resources. For the same reason of land shortage, her own family members want to move her out quickly, especially if she has children who will compete for family land. A rejected trial wife may thus end up with no home and fast disappearing chances that a subsequent partner will want to support her children. Women, therefore, are marrying later not necessarily to prolong a school career; rather, they may be going from one man to another, increasingly less likely to marry as they accumulate children.

EFFECTS OF MARITAL CHANGES ON PREMARITAL SEXUALITY AND REPRODUCTION

The tendency for individuals to draw out the period of conjugal testing and make relationships more contingent has immediate relevance for adolescent fertility. The strong preference is for births to occur within marriage. But for many young women, pregnancy (like marriage) is a process of testing relationships with potential partners and weighing the possible benefits of continuing them against the costs of forgoing career options or having the father abscond.

The fluidity and ambiguity of marriage can work either to the advantage or to the disadvantage of individuals. Some women can take advantage of the ambiguities of marriage to test men's reactions and then respond

accordingly. Once pregnant, for instance, a woman may decide to proceed with the pregnancy and bear the child if the man appears to be showing paternal interest and is supportive; if he proves uninterested, she may try to abort in order to continue her school career or find another man.

For men, the trend in Africa appears to be one of marginalizing certain unions, rather than delaying unions or forgoing them altogether. New pressures brought by education and economic competition appear to be intensifying differences among a man's partners who previously would have lived together, shared household resources, and acknowledged each other as co-wives. To be sure, for many of these women, becoming an outside wife is a significant move up the social mobility scale. But the fact remains that women who are acknowledged as "official" wives enjoy relative security within the conjugal unit, whereas lower-status women find themselves stalled as outside wives in a remote orbit of the marital process by men who must maintain a monogamous appearance.

At a broader level, although the problems associated with premarital adolescent reproduction seem to point to marriage as the main determinant of legitimate reproduction, a premarital pregnancy is not necessarily unwanted or illegitimate. Viewing marriage as a process means that the birth of a child—the first child, in particular—may be an important step toward a union, rather than a logical outcome of it. In view of these ambiguities, making a distinction between conceptions before and within marriage may be largely inappropriate. It is not clear, then, that marital status is the best variable for distinguishing between sanctioned and unsanctioned childbearing.

The next chapter looks beyond marriage to some further conditions of entry into childbearing. It shows that in many African societies, people may place less emphasis on marriage for defining legitimate childbearing than on children having an acknowledging, supportive father or on the parents completing a successful transition to adulthood. Because the DHS does not immediately suggest other variables that may be as important to the legitimization of a pregnancy, marital status and age at marriage must remain the index questions. We caution, however, that this is a default strategy: Marriage is at best a proxy for what are likely to be considered locally much more important criteria of reproductive entitlement.

Reproductive Entitlement: The Social Context of Fertility and Parenthood

As sub-Saharan Africa approaches the year 2000, its fertility rates remain the highest in the world. Increases in contraceptive use and decreases in fertility have been observed recently in Kenya, Botswana, and Zimbabwe (Cohen, 1993; Working Group on Factors Affecting Contraceptive Use, 1993). Most family planning programs, however, encounter reactions ranging from polite interest to resentment.¹ Why are some of these reactions so strong?

Virtually everyone in Africa, from rural farmer to sophisticated urbanite, experiences intense pressure to become a parent. As we have seen, marriage is quite important in sub-Saharan Africa. Yet the process of maturation is geared less toward marriage than toward preparation for parenthood. Fortes (1978:121) was quite right when he pointed out that "... it is not marriage but parenthood that is the primary value associated with the family in West Africa." Throughout the subcontinent, failure to bear a child has long been a major cause of divorce or of men marrying additional wives (for example, Chojnaeka, 1980; Denga, 1982; Brandon, 1991).

Although fertility is intensely valued, two powerful conditions are attached to it. First, it ideally occurs within "sanctioned" states. Although

¹For example, see the descriptions of negative reactions in Zambia in *The Zambia Daily Mail*, May 18, 1989, p. 4, and June 2, 1989, p. 4; and *The Times of Zambia*, June 9, 1989, p. 6. See Caldwell and Caldwell (1987) for a general discussion of cultural values supporting high fertility.

outsiders often assume that this sanctioned state is marriage, entitlement to reproduce is more fundamentally earned by undergoing ritual or learning experiences that prepare individuals to be responsible parents. The second condition for sanctioned reproduction is that the child have an acknowledging social father, whether or not he is the actual biological father: someone who will share with the mother the financial responsibility of raising the child, whose own family will enlarge the network of potential allies and supporters for the woman's family, and who may offer spiritual guidance that is essential to the child's development.

As Chapter 3 explains, a premarital birth, the variable that this report has taken as its initial focus, is not necessarily unsanctioned, so long as the father acknowledges his paternity. We therefore treat an increase in premarital births as a possible indicator of a more serious change: a rise in unsanctioned births that occur either without paternal recognition, or outside of what is considered the proper life cycle phase. Because quantitatively measuring such changes is virtually impossible given the data now available, this chapter lays out a broader historical and cultural perspective that may help to illuminate these aspects of reproduction.

Focusing on reports of precolonial dynamics, we stress that sexual expression and legitimate reproduction were two conceptually separate activities. In many African societies young people were allowed, even encouraged, to engage in limited kinds of sexual expression; but they were not supposed to reproduce until qualified, whether through training (that is, formal education or informal apprenticeship) or ritual initiation, for the labor-intensive and costly process of raising children. There were breaches of this norm, no doubt; many references to the past both by ethnographers and by societal elders may be idealized statements. Still, the overwhelming perception today is that family elders in Africa are losing control over youthful reproductive life and practices. The perceived results are both the rupture of a carefully ordered sequence of maturational events that underlaid successful reproduction, and, more recently, a decline in men's willingness to acknowledge paternity. The ultimate result is an increase in unsanctioned births.

THE POLITICAL ECONOMY OF MARRIAGE AND REPRODUCTION

The importance of the events that cluster around adolescence in Africa can be comprehended within a broader socioeconomic framework that is characteristic especially of the past. In this framework wealth and value derived less from land, as in Europe, than from human capital. (See Goody, 1976, for the major statement of this contrast.) At low population densities the conquest of land could bring neither wealth nor power. Political com-

munities and productive economies could be built up only by a deeply attentive construction of ties of personal dependence among people. The ethnographic and historical literature has characterized these social dynamics as a "wealth in people" system, in which the control of dependents meant status and security (for variants on this theme, see Mair, 1953; Fallers, 1964; Goody, 1971; Meillassoux, 1975; Kopytoff and Miers, 1977; Bledsoe, 1980; Etienne, 1983).

Although strategies involving the derivation of wealth from people could be applied to all relationships, they were deployed most fully with respect to marriage, reproduction, and child raising. The ethnographic literature suggests strongly that these societies encouraged prolific childbearing and that people sought in various ways to gain control over women's reproductive capacities. Men sought to maximize their wealth by taking more than one wife, and by choosing young women, who had a longer reproductive life remaining to them than did women in their twenties and thirties. Discussing "maidenhood," Whiting et al. point out that African societies attempt to "make full use of the reproductive lives of their females" (1986:290). Polygynous marriage and the welding of the complex kinship ties it created were among the most important strategies a man could employ to build a prestigious personal career. Marriage started a man's autonomous career of building up his own "wealth in people," and it followed a clear accumulative dynamic. Wives brought with them skills in farming and advantageous political connections, and they bore children who themselves could eventually contribute to the family's name and strength.

Marriage and parenthood not only contributed to a man's status; they were measures of it. For individual men, multiple wives and sexual partners were both an avenue to wealth and a public expression of power. They were also a means of creating the next generation and endowing it, in turn, with the resources needed to survive childhood and to be sponsored to full maturity. The lack of a wife, and by extension the lack of full sexual opportunity, was a sign of youth, all levels of servility, and poverty. Women's sexual demands, by contrast, were not related to their power in the larger political arena or to the accumulation of wealth. Polyandry occurred in some places, but it was not available for all women (Douglas, 1963). Where women had publicly acknowledged multiple partners, the practice was uncommon or sequential, at least where sex was not an income-earning occupation, as it became during the colonial period (see Cohen, 1969; White, 1990).

THE VALUE OF CHILDREN

Especially in the past, having children was the essential mark of manhood and womanhood (for Nigeria, see Isichei, 1978). The Tallensi of

northern Ghana believed that "no one is so unfortunate as a woman who has no children" (Fortes, 1959:37). In Kenya the Meru people forbade childless men to participate in certain ceremonies and rituals (Mwambia, 1973). In eastern and southern Africa a barren woman had failed to fulfill her obligation in life; her condition was viewed as a punishment from the gods or the ancestors or as the result of witchcraft (Kershaw, 1973; Mwambia, 1973; Ngubane, 1977). Many societies buried childless women with minimal respect if not with contempt: their bodies were sometimes mutilated (for the Yoruba of Nigeria, see Caldwell and Caldwell, 1985; for the Gusii of Kenya, see Mayer, 1973).

That societies of the past emphasized fertility should not be surprising. Yet the desire for high fertility persists as a strong value even in contemporary urban situations, in which the utility of children as subsistence laborers has diminished and their costs of maintenance and education have increased.

Children still play important roles in the domestic economy. Girls as young as 5 or 6 help with cooking, cleaning the house, bringing water, looking after smaller children, and, at times, trading. Though they have more license to roam about with friends, boys, too, are put to work. As adults, children who go elsewhere to obtain employment are reminded at every opportunity that their remittances are vital to their kin. Those who remain take over the household and its financial matters, allowing parents to assume the roles of elder statesmen who bestow advice and blessings on the young.

For men, children forge firmer links to potentially advantageous in-laws. They also enhance men's long-term hopes for improving the material well-being of their families and their ability to compete with rival families for positions of political leadership. In Freetown, Sierra Leone, men are warned against marrying infertile women, and some prefer proof of fertility before marriage (Harrell-Bond, 1975; see also Obbo, 1987, for Uganda, and Mbatha, 1983, for Swaziland). The Demographic and Health Survey for Liberia asked women if men preferred to marry a woman who had already given birth; 27 percent responded positively, 36 responded negatively, and 36 percent said that they did not know.

Women's needs for children are no less acute. A married woman needs children to justify demands on her husband's wealth and estate. Co-wives feel this need most painfully. No matter how well they get along, polygynous wives jealously observe how many children the other wives bear; a subfertile wife must watch her productive labor for the household going to benefit her co-wives' children. Fearing to short-change any of his wives of children, a polygynous man is a reluctant advocate of birth control (Bledsoe, 1992). Even for unmarried women, children are valued. In Sierra Leone, the changes wrought by Christianity and education have not dampened the attitude that unmarried mothers are far better off than childless women.

Although they prefer their daughters to marry, desperate parents may pressure an older educated daughter to have children, though no permanent husband is in sight.

In western Nigeria, parents now expect little daily material support from adolescent and adult children or their spouses (Guyer, 1988a). Farm work has become increasingly commercialized, and fathers cannot count on their offspring to work from a sense of obligation (see also Berry, 1985). Sons can be too busy elsewhere in the local economy, or they can disappear into the urban labor market. But although adults have fewer sanctions to impose on their sons and daughters themselves, the socioeconomic context still offers indirect benefits to bearing children. Economic instability pressures women to establish immediate *lateral* links with different men and their resource networks. Lateral strategies can yield dividends in less time than it takes children to mature, and they offer greater breadth and flexibility of networks. At the heart of these lateral strategies are children. A woman can press her demands on a man, whether or not they call their relationship a marriage, with far greater leverage if she has a child by him—a strategy Guyer calls “polyandrous motherhood.” Marriage, in fact, can become almost incidental to a woman’s reproductive career. “The child is the key; without it there is no basis to claim anything beyond the moment of the relationship” (Guyer, 1988b; see also Karanja, 1987).

In many African countries, successful children become brokers for their families in broader national contexts of patron-clientelism. Jobs, scholarships, money, and land are dispensed through personal ties to powerful mediators who can maneuver within government bureaucracies to obtain resources for their dependents. With precipitous declines in national economies, people have an even greater need for patrons well connected to the urban and government bureaucracies to help them bypass cumbersome channels during shortages, and to provide them with crucial ties to the international world for travel, jobs, and access to hard foreign currency.

REPRODUCTION WITHIN THE SEQUENCE OF LIFE EVENTS

For precolonial Africa, temporally ordered events and the predictability they lent to life were fundamental to society. Social rankings were often based on temporal ordering: In parts of eastern and southern Africa, siblings were ranked by birth order, co-wives by sequence of marriage, generations through age grades, and kinship groups through the reputed order of their ancestors’ order of birth or arrival into the area. A temporal ordering and pacing of events was also important to the life cycle of individuals. Rather than a passively experienced series of maturational events, life was cast as a process of ordered achievements, a succession of ritualized steps (see, for example, Menkiti, 1979; Ottenberg, 1989). Even as adults, people

might still be working up the gradations of title societies whose final stages conferred full social majority.

It was particularly important to confine conception and childbearing to a properly ordered and paced life sequence from birth, through puberty, training, marriage, parenthood, entry into work, and death. Obviously, the preferred sequence of life events varied from one society to another. And the sequence was not intractable; it could be followed rigorously or adapted to new circumstances. Yet when a breach in the sequence was perceived, condemnation could be swift. One of the most important pieces of evidence that fertility was not always valued comes from widespread reports of indigenous contraceptives and abortifacients (and even, occasionally, infanticide) among unmarried women and among married women whose husbands had been away (see Caldwell and Caldwell, 1988; Lema and Kabeberi-Macharia, 1990, for Kenya; Mueller, 1976, for the Rukuba in Nigeria; and Schapera, 1933, for the Tswana of South Africa).

Because many of these crucial events occurred around adolescence, the way adolescence proceeded was considered vital to a successful reproductive life, and thus to the well-being of the family and community. Adolescence set the stage for producing the next generation, whose skills and character would ensure continuity and security in an environment fraught with uncertainty and risk:

. . . it is truly during adolescence that the traditional African society proceeds to a sort of renewal of each child in order to prepare him not only to face this crucial period as someone who is informed, but especially to give the basis of his adult life . . . and thus to lead him to become . . . perfectly integrated in his milieu and ready to assume the social role which belongs to him In his procession towards an adult age, the child is not therefore abandoned to himself; a global education is given to him by the group [Sala-Diakanda, 1991:4-5].

EARNING REPRODUCTIVE ENTITLEMENT

Scholars have tended to emphasize the benefits that adults reaped through children. But adults also had to invest considerable material and social capital in the young so they could meet their full potentials and assist their families to progress. The need to ensure societal continuity was deemed so important that the task of training and sponsoring a child could not be trusted to the parents alone; it was instead considered a societal responsibility (Sala-Diakanda, 1991).

The cultural emphasis placed on raising the young made socialization a costly, labor-intensive process in precolonial Africa. The sequence of events making up the reproductive cycle of procreation, socialization, and social attachment was minutely specified, lavishly supported by material and hu-

man resources, and attentively sanctioned by religious and political powers. To begin a social career, a child established his position in his parents' kin groups typically by completing specified ritual or economic transactions. A key element of this process was the consolidation of his relationships with an expanding array of individuals and groups; these relationships were expected to be reaffirmed repeatedly at key points in his development.

The Igbo of eastern Nigeria offer a striking example. Writing of the 1950s, Ottenberg (1989) reports that by the time a young man was about 18 he had been through two major rituals of infancy and early childhood, had belonged to three successive boyhood societies, each with its initiation rituals, and had finally graduated in a formal ceremony to membership in the adult male society. He had been trained as a warrior and had acquired basic productive skills and religious knowledge. He had been allowed an indulgent, but not usually sexual, friendship with a girl from his peer group in early adolescence, and had been betrothed for a marriage that would not take place until he was considered fully mature, with his own house and gardens, in his late twenties. Every stage from conception to marriage involved making or acknowledging ever-widening ties with peers, sponsors, teachers, patrons, and future in-laws. Each stage had to be correctly enacted for the young man's own social and reproductive career to be successful. Deviations and failures could bring large fines, costly redemptive ceremonies, or physical punishment.

After initiation, a young man faced a period of up to 10 years when sexual access was "uncertain and erratic" (Ottenberg, 1989:301) because the only possible partners were the few unmarried girls, divorced women, stranger-prostitutes, and married women bold enough to engage in adultery. The passage of boyhood events and their concomitant buildup of carefully forged relationships gradually began to merge with overtures toward a young woman's family by the young man's family that signified the beginning of a conjugal relationship. Marriage itself was therefore a gradual achievement of status. Like the process of moving from one maturational phase to another, each step toward an eventual conjugal tie might be symbolized separately by the long series of exchanges. Ngoi (1950) gives an early participant's account for the Nkundu of Zaire: Three differently named sets of gifts transferred different rights and obligations between the two families, and each of the nine components of the last gift recognized the particular content of the relationship of the gift's recipient to the bride.

Throughout Africa, societies followed various versions of this kind of elaborated sequence of maturation. In eastern and southern Africa, where age-grade organizations were important elements of political organization, young men graduated from the boyhood groups into military regiments before taking up marriage and reproduction. In western and Central Africa the rituals of initiation took on heightened drama: Young people of both

sexes could spend months or even years traversing all the stages of the religious threshold into adulthood (see, for example, MacCormack, 1982). Especially for young women, these stages often blended with those ushering in marriage. So intense was this emphasis on proper preparation for reproduction that in many cases it strongly affected the interpretations local people placed on modern innovations. Among the Bangangte of Cameroon, Feldman-Savelsberg (1989) reports, in the past a girl was secluded around puberty and fed rich foods to fill out her frame, a widespread western African practice that MacCormack (1982) argues may have accelerated menarche. Many older Bangangte women equate modern schooling literally with this practice: "Girls [are] sitting in school doing no physical labor, eating up household resources, and preparing themselves for marriage" (Feldman-Savelsberg, 1989:216).

This emphasis on taking time to develop the potential in children through ritual and training meant that no matter whether young men and women were *physiologically* mature enough to reproduce, they were expected to be prepared *socially* for the vital role of reproducing and supporting the next generation. This expectation, in turn, implied that sexual access and, to a much greater extent, parenthood were to be earned; one became *entitled* to reproduce. During the various stages of socialization, children and adolescents were not supposed to be endowed with procreative capacities. Robertson (1984:167) quotes an older Fanti woman in Ghana who describes her mother's reaction to her menarche in 1928:

She invited me indoors and told me that a rite had to be performed for me, and that it was forbidden for a girl to conceive before its performance. She therefore warned me to keep away from sexual intercourse since I could conceive once I had my first menstrual period.

Only individuals who had achieved social adulthood were considered able to generate the recognized value and wealth that bearing and raising children demanded. As Mutambirwa (1990:4) explains for Zimbabwe, the milestone of maturity was reached when a young couple could "deny themselves of physical comforts in order to promote the physical, social and spiritual well being of their . . . child . . .".

Where unmarried men were allowed certain kinds of sexual access they could not usually claim the children (see, for example, Laburthe-Tolra, 1981, for the precolonial Beti of Cameroon). To be allowed to impregnate but not to claim the child was considered "working for nothing." In the extreme case of this philosophy, low-status people of all kinds, clients, youths, and slaves could be forbidden ever to work directly on any goods that counted as wealth, let alone claim them, so clear was the association between status and the right to generate wealth, of which children were an important component (Mandala, 1990).

THE BOUNDARIES OF ADOLESCENT SEXUALITY

Underlying this approach to life was a highly positive attitude to sexual relations, especially for men. Yet sexual access came with complex directives. Although many African societies allowed and even encouraged young men to be sexually expressive, they were not necessarily entitled yet to procreate. Sexual expression might precede marriage, but it was held in check by various means until reproduction could legitimately ensue. Barriers sharply separated sexuality from legitimate reproduction even in practices involving women of low status. In a historical study of the now-defunct practice of pawnship—giving a child temporarily as security for a loan, Falola (1993) reports that in pre-twentieth-century Nigeria, even though a female pawn was subservient, the contract explicitly forbade sexual access to her on pain of a fine.

Attaining a state in which reproduction was legitimate almost always entailed ritual passage of some sort through learning or testing of mettle. To attain legitimate reproductive status, girls often underwent a series of expensive initiation ceremonies. In some instances initiation included female circumcision (more accurately, clitoridectomy), a practice that arouses considerable controversy. As practiced in the women's secret Sande society of Sierra Leone and Liberia, it has been explained as a measure to render a girl wholly female (see, for example, MacCormack, 1975), to facilitate sexual relations (Sawyer and Todd, 1970), or to cool the sexual passions of women and curb their infidelity (Schwab, 1947). Speculating about Nigeria, for example, Susan Rich (personal communication) posits an inverse relation between early marriage and female circumcision. Societies with very early marriage are less likely to circumcise girls because the problem of premarital births is circumvented.

Even in most matrilineal societies, in which the child's membership in a lineage was not at stake, it was crucial for the mother to have already passed through the puberty ceremonies that legitimated her capacity to procreate (see, for example, Richards, 1982, on the Bemba of Zambia; Brydon, 1987, on the Avatime of Ghana; Fortes, 1950, on the Ashanti). Compared to patrilineal groups, matrilineal groups such as the Akan of Ghana appeared to be more tolerant of adolescent sexual activity and births (for the Coniagui of Guinea, see Gessain, 1971; for the Ashanti of Ghana, see Fortes, 1978). Even so, among the Ashanti in the 1930s and 1940s it was a serious crime for a girl to become pregnant before her nubility ceremony (Fortes, 1954:265). According to Fortes, who described "the religious horror of pregnancy before the nubility ceremony," "the shame for the girl's parents is so great that, as the Ashanti say, they would rather be dead than endure it" (cited in Caldwell and Caldwell, 1988). Similarly, Richards (1982:33) observed that among the matrilineal Bemba of Zambia, "[o]ne of the most

fatal acts of all was for a girl to bear a child before she had been initiated Her child would then be a creature of ill-omen . . . who would bring misfortune on any village in which it lived" (see also, for example, Gessain, 1971, for Guinea).

In many areas these ritual boundaries remain so important that some societies, both patrilineal and matrilineal, have deliberately reduced the age of these rituals to prevent the otherwise unacceptable procreation that occurs under the new conditions of the twentieth century (see Ottenberg, 1989, on circumcision of Igbo boys in Nigeria; and Bledsoe, unpublished field notes, on initiations of Mende girls in Sierra Leone). With the same aim, other societies have mandated the retroactive power of the rituals (see Brydon, 1987, on the adulthood ceremonies of Avatime girls in Ghana). In a contemporary variant on this theme, in urban Accra marriage is no longer a requisite for women's entry into socially defined adulthood; but initiation—though it may now take place after the births of several children—is still considered mandatory (Brydon, 1983).

Even within marriage there were strictures about when reproduction could, and could not, legitimately occur. The ubiquitous requirement to observe a period of abstinence after the birth of a child is an example (Page and Lesthaeghe, 1981). Other constraints within marriage applied in western African societies in which women marry at very early ages. Such sanctions characterized especially those societies influenced by Islamic doctrine, which employed early marriage to assuage worries about female sexual purity and unsanctioned births (see Dupire, 1963, for the Fulani in Niger, and Schildkrout, 1983, for the Hausa in northern Nigeria). Although the young bride might live in the husband's household and perform domestic chores, full sexual relations were sometimes delayed for several months or even years so that she could mature physically, as Marris (1962) indicates for the Hausa. The senior wife was often the one to inform her husband when the young woman was old enough to begin sexual relations and childbearing, an event that was frequently marked ritually. In other cases, a girl as young as 12 might be married, according to her society's customs but remain with her own parents for some years until she matured. "Though . . . the couple are considered man and wife, . . . several months and sometimes up to several years will go by before the next ceremony . . . (fetching the bride) . . . occurs" (Riesman, 1992:84, for the Fulani, in what is now Burkina Faso).

The Senegalese fertility survey found quantitative evidence for this pattern among the Fulani people (Republique du Sénégal, 1981). It pointed out that Fulani women have a very low median age at marriage, 15.4 years, about two years younger than women in the country's other ethnic groups. Yet they tend to be less fertile during the first years of marriage than women in other groups: 138 births per thousand women in the first five

years of marriage, compared with 159 for the Wolof, 177 for the Mandinka, and so on. This delay could well be attributed to physical immaturity, and a practice referred to as *jebalé* (Republique du Sénégal, 1981). According to Pierre Ngom (personal communication), this is a Wolof loan word, a verb meaning "to provide." It refers to the parents' act of finally "providing" the man with the wife he married some time ago. In the meanwhile, the bride might live with her parents, while the husband paid bridewealth installments and she matured.

The following excerpts from a woman's life history in rural Sierra Leone vividly highlight some analogous patterns in a different cultural setting (Bledsoe, unpublished field notes, 1982). The case stemmed from a healing episode, in which an Islamic holy man was said to have cured a barren woman's sterility. In gratitude, the woman's husband sent the baby daughter she bore to be the holy man's wife. As told by the now-adult daughter, this life story reveals the considerable danger in taking Western categories of "marriage" and "wife" at face value in Africa. The woman begins from her early childhood:

Right from the start, I was thinking that the man was my father because of the way he cared for me. When I was about ten, people started to tell me that he was my husband and many a time he told me exactly what he did [for] my parents before I was born When I was about fifteen, we went to my parents and everybody was surprised to see me now as an adult. A lot of young men in my village wanted to marry me, but my father told them that it was too late as I was already married to an Alpha [Islamic scholar/holy man]

I did not really know what marriage was. My idea about marriage was just to work for the husband, launder his clothes, look after him, etc., as this was exactly what I saw the others [co-wives] doing, not knowing that I had a big job ahead. The year that I was going to be initiated into the [Sande] society, my father made a very big farm [to pay for the initiation] After the ceremony was over my husband went and married me from my family, and all the customary [things] were done by him. At last, I was taken to him as a wife After one week, he invited me to his room to spend the night with him. I became afraid, especially when I saw the bed dressed with a white sheet, not knowing that it was meant for a purpose. The very first night I spent with him, I will not forget it for life. The white sheet was messed up with pure blood. The big [senior] wife took it to my parents with a sum of two leagues and ten cents. This was a great respect to my parents, as I was [proven] a complete virgin.

THE REGULATION OF PATERNITY

The preceding discussion has established the importance of ritual or economic preparedness for childbearing. The second major stipulation that

most African societies made about reproduction was that a man should be willing to undertake the social and economic responsibilities of fatherhood. Although this requirement sounds very much like Western notions of legitimacy, there are two acute differences. First, to many Westerners, legitimacy rests largely on whether the mother's husband is the biological father of the child she bears. Second, and more important, Westerners have been preoccupied with timing: whether the conception, but most especially the birth, occurred while the mother was married, with divorce or widowhood being the main allowable exceptions.² Worries about inheritance of small, finite supplies of land or property may have prompted European societies to create a "highly developed concept of illegitimacy" (Laslett, 1980:9). In any event, European societies also seemed "to have classed the largest possible number of children as illegitimate" (Laslett, 1980:9).

Most African societies see the matter quite differently. Legitimacy is not always linked to being born within the temporal confines of a recognized union, nor is it tightly linked to biological descent. Indeed, although biological and social fathers should ideally be the same, the former are usually recognized as less important to the welfare of the child than the latter (see, for example, Fortes, 1950). Whether the parents have actually concluded a marriage is considerably less important than whether a man is willing to acknowledge fatherhood and to claim the social and economic responsibilities of that role.

The reason why securing a responsible father is so important to a child is not only that the father will share the financial responsibility of raising the child, but also that his family will enlarge the child's network of future allies and supporters. None of the vital life events that an individual undergoes—birth, education, marriage, childbearing, or death—should be accomplished in the absence of supportive kin or friends. Ties with other families and groups are needed to support and affirm the important events in life. The corollary of this observation is that vital events such as births, in turn, should ideally lead to the construction of newer, more solid ties with people outside the immediate family, a point that Riesman eloquently articulates in his study of Burkina Faso (1992). Childbearing, like other major events, should create new ties and deepen existing ones.

Especially in the past, having a recognized father located a child securely within the protection of two kin groups. In patrilineal groups, the

²To be sure, demographic historians of Europe, such as Peter Laslett (1980:8), have pointed out that there were often important differences between "prenuptial" births or pregnancies and "extramarital" births in general. The implication is that a premarital birth or pregnancy to a couple who intends to marry bears considerably less stigma than a birth occurring wholly outside the realm of marital intentions.

most prevalent in Africa, paternity gave a young man a name, an identity, and a source of wealth for marriage and inheritance. In matrilineal groups, children were the basis of the woman's lineage strength and paternal legitimacy per se was less important than it was among patrilineal groups. Yet even in these groups, an acknowledged paternity was vital, as Fortes (1950:266) confirmed:

What is . . . reprobated and considered shameful, to the man as well as to the girl and her maternal kin, is refusal on his part to acknowledge paternity of the child. The latter is fully legitimate, as far as his status in his matrilineal lineage is concerned, but he carries a stigma which may be thrown at his head in later life in a quarrel. Paternity is acknowledged by the man's accepting the responsibility of maintaining his lover during her pregnancy and by his giving her and her child a number of customary gifts immediately after delivery. On the eighth day after its birth . . . the child is named by its acknowledged father; and this is the critical assertion of fatherhood.

Because of their overall value, children born to an adulterous union might be assimilated into either their mothers' or their fathers' families. But assimilation was not automatic. Such births might necessitate the official identification of the father and expensive redress of some kind, whether indemnities or rituals of purification (Ottenberg, 1989). Children lacking acknowledging fathers might be permanently assigned to servility (Laburthe-Tolra, 1981, on the Beti of Cameroon). The possibility that the famous Shaka, founder of the Zulu Empire in the nineteenth century, was conceived under unacceptable circumstances—and suffered the consequent severe denigration in childhood—was used by novelists, historians, and local people themselves to explain his later ruthlessness (see, for example, Mofolo, 1931).

Just as fears of reproduction during unsanctioned states made people devise creative protective measures for young women, so was young men's behavior channeled. In eastern and southern African societies, adolescent boys were taught how to have sexual relations between the thighs of their girlfriends, so as to prevent the pregnancy that was the sole prerogative of the girls' eventual husbands, older and more powerful men, to initiate. Among the Kikuyu of Kenya such practices were called *ngweko*, and both girls and boys were instructed in their use by the next older age set (see Kenyatta, 1971; Launay, forthcoming, reports similar practices in the past in Côte d'Ivoire).

Adolescent *ngweko* relationships typically involved multiple partners; one avoided seeming selfishly possessive. In Nigeria, Igbo adolescent girls and boys paired off for mild sexual play and "moonlight dancing," sleeping together on mats under the watchful eye of parents or the girl's betrothed husband, with the girl decked out in a special garment tied tightly through the crotch (Ottenberg, 1989). Where full sexual relations were allowed for

young men, as they were for the Masai in Kenya, they were limited to nonmarriageable, uncircumcised prepubertal girls, with an explicit prohibition on premarital pregnancy (Standing and Kisekka, 1989). The sanctions against unacceptable sexual practices that could lead to reproduction among unprepared youth could be extremely severe, including enslavement.

For young men, then, societal determination to separate sexuality from legitimate reproduction created an expectation of male sexual discipline. Youths were expected to acquiesce to long periods of celibacy or to exercise restraints on full penetration. Even after marriage, a man could spend long periods practicing self-control so that his wives could observe up to three years of postpartum abstinence for the physical and spiritual welfare of the child (Caldwell and Caldwell, 1977; Page and Lesthaeghe, 1981). And in areas where women married as young as 11 or 12, marriage to a young bride did not always entail immediate sexual access. In northern Nigeria, where radical female circumcision is practiced, younger men, especially those with no other wives, were viewed apprehensively as prospective husbands for virgins; older men were deemed more likely to manage a careful approach, taking up to 18 months to achieve full consummation (Murray Last, personal communication). Combined with these constraints imposed on certain phases of life, however, were numerous medicines to promote male potency and sexual stamina in other phases of life, as well as potions for women to increase attraction and receptivity (Longmore, 1959; Keller, 1978).

In sum, the expression of sexuality and reproduction were culturally endorsed; but they were supposed to occur only within sanctioned states. Indeed, a theme that emerges repeatedly in ethnographies of the past is the number of socially defined obstacles to reproduction: injunctions to delay the expression of sexuality until after initiation, to avoid reproductive sexual relations with an inappropriate partner, to postpone full sexual exposure for an immature married girl, and to observe postpartum abstinence during breastfeeding. For women the pressures to reproduce while adhering to these strictures resulted in a quick entry into active sexuality and childbearing, followed by long nonreproductive spaces between children. For young men, these strictures appear to have resulted in long periods of nonreproductive adolescence. When nonsanctioned births did occur, it was generally the women and their offspring, rather than the men, who suffered the most serious consequences.

These injunctions defined a trajectory of male sexual life that was very different from the traditional European image of a two-step sequence of celibacy, or near celibacy, followed by routine sexual access to one woman. For African men, the peaks and troughs of sexual access were much sharper and recurred throughout life: Routine sexual access was guaranteed only to high-status older men with many wives. Sexuality was paced and built up

over time during a long process of training and of economic, social, and ritual investment.

CHANGES IN ADOLESCENT SEXUALITY AND REPRODUCTION

How have the dramatic changes in the wider society and economy that are described in Chapter 3 in law, religion, and education—affected not simply marriage but entry into sexual life and childbearing? It is dangerous to draw conclusions about change. African societies of the past have been portrayed romantically, as harmoniously integrated, sharing, and free of major inequities; by extension, the present is often cast as a moral wasteland. Similar dichotomies have applied to descriptions of sexuality. Some sources portray a puritanical past in Africa; others see permissiveness. (For a detailed review, see Caldwell et al., 1989; see also Le Blanc et al., 1991, and the Caldwell et al. response, 1991.) Without question, there were deviations in the past from the ideals just as there are certainly deviations today—quite likely many of them. However we interpret the ethnographic evidence, marriage per se probably was less important for sanctioned reproduction than were acknowledgment of paternity and the parents' ritual preparedness.

Many studies of the present allude to increasing sexual activity and unsanctioned reproduction among unmarried adolescents. Some are based on assertions that experiments in nonreproductive sexuality have declined (Kenyatta, 1971; Launay, forthcoming). Others observe the rise in the phenomenon of "outside wives" (*deuxième bureau* or *femmes libres* in French) in urban centers in diverse areas: the copper belt, Zambia (Epstein, 1981), Lagos (Karanja, 1987), Nairobi and Dar es Salaam (Southall, 1961; Obbo, 1987), Lusaka (Schuster, 1979), Freetown (Harrell-Bond, 1975), and Accra (Dinan, 1983). The seeming increase in pregnancy rates among schoolgirls, and the resulting disruption of their education, have been another major cause for concern (Southwold, 1973; Schuster, 1979).

The precise causes of these changes are not clear. Some studies cite the Western ideas that eroded the old checks on sexuality when young people encountered new opportunities to achieve status outside the family. These opportunities took the form of migration to cities, conversion to new religions, school attendance, and legal measures against the military activities of age sets (see, for example, Ocholla-Ayayo, 1976). Wangui Njau (personal communication) has articulated the widespread view that Christianity in particular produced a paradoxical effect: In banning customs such as polygyny, child marriage, and *ngweko*, which ran counter to Western norms of propriety, Christianity ironically spawned more promiscuity.

New Patterns of Male Sexuality and Reproduction

For young men the large age gap between spouses and the resultant high levels of polygyny still delay marriage until the late twenties or older. Yet certain values within the broader economic and demographic regime of "wealth in people" that emphasize sexuality and reproduction clearly continue to be powerful. Most notably, both the contemporary media and rumor still present male power as entailing an active and varied sexual life with multiple partners. (See Clignet, 1970; Bleek, 1976; Pellow, 1977; Schuster, 1979; Asante-Darko and van der Geest, 1983; Hagan, 1983; Pittin, 1983; Karanja, 1987; Obbo, 1987; Okpewho, 1987; Ba, 1989). The following passages reflect these mixed feelings:

A man like Gorgui Mbodj, a descendant of such an illustrious lineage, should be ashamed to be monogamous. He has the obligation to perpetuate his blood through an acceptable number of children [Cheik Aliou Ndao, Burr Tillen. *Presence Africaine*, 1972, p. 11; translated from a quote in Pison, 1988:249].

[The] [f]ormer Senate President [of Nigeria] . . . was romantically linked with too many beautiful women On one occasion two young women arrested at an airport with some quarter of a million naira and vast sums of foreign currency claimed they were on a mission for [him] [*Concord Weekly*, Nigeria, July 27, 1984, p.7].

The first episode of Kole Omotosho's docudrama-style history of Nigeria traces out the assassination of the Head of State in 1976 and the capture of the principal plotter, Lieutenant-Colonel B.S. Dimka, in a hotel with a prostitute. His routine while on the run included "where possible finding a woman to share his bed in the afternoon" [Omotosho, 1988:24].

Although access to fully sanctioned sexuality and reproduction is still limited for young men, elders today complain that many of the intricate controls exercised in the past by adults over youthful aspirations to full sexual expression are being dismantled. The observations by David and Voas (1981:658) of the Fulani of Cameroon reflect the general attitude toward male sexuality: "There is no expectation that young men remain celibate before marriage, nor is any value placed upon the fidelity of married men, particularly when away from home." Throughout the region, full premarital sexual relations of men are now taken virtually for granted.

The actual levels and forms of male sexuality are not well documented empirically, except possibly in new research on AIDS. In particular, we lack information on the age at first sexual experience and on the age at first marriage for men. But the combined logics of the ethnography of precolonial demographic regimes, the history of colonial social and economic change, and the demography of current age and marital patterns strongly suggest that, contrary to popular perception, elders' control over youthful fertility

may have changed more for young men than for young women. In the past a young man might have had little opportunity for full sexual expression until his late twenties. Today opportunities for schooling and employment outside the family give young men more independence, and they aspire to a sexual access that the elders' power can no longer deny.

Substantial anecdotal evidence supports the views of society elders that the age of full sexual expression for men has fallen (see, for example, Launay, forthcoming). A Yoruba man complained that the father of his daughter's child was "just a boy," and therefore not able to marry or take on responsibility for the child; and in western Nigeria, members of the older generation charge that an increase in sexual expression is one effect of underemployment for youths—youths with "nothing to do" (Guyer, unpublished field notes).

Church teachings about abstinence have meant that young people are no longer taught the practices of incomplete intercourse that were once permitted (Scheub, 1988), or that they may be unwilling to use them. The life history of a Xhosa woman born at the turn of the century includes a description of courtship with *imetsha*, incomplete intercourse, starting before puberty (Scheub, 1988), but it is said to be little practiced now. The initiation schools of South African peoples, in which boys learned sexual skills, were already controversial and in decline by the 1950s, and where they existed they were least relevant for urban children. Urban Africans commented that "the excellent custom of *ukumetsha* has been lost" (Longmore, 1959:46, 157-160).

Changing employment possibilities for young men also may allow greater sexual freedom. Work opportunities typically draw young men away from parental authority, as short-term wage workers, loosely attached apprentices, and self-employed hustlers of many kinds. At the nodes of the transport system, the numerous teenage boys who load lorries, entice passengers, collect fares, and sell anything from mothballs to mousetraps are quite aware that some women offer their sexual services to make a living. With the high value that the society continues to place on sexual expression, these young men are hardly likely to remain aloof.

Relaxing restrictions on sexual expression for young men would substantially intensify the sexual demands on teenage women. And, although men of senior generations continue to seek partners of varied ages, they now compete more directly with young men for younger women. The result of all these trends may be a great increase in the sexual demands men place on younger women, both married and unmarried.

Although the age of full sexuality may have fallen for men, young men nevertheless appear to be avoiding the social responsibilities of paternity before they are considered ready. Court cases from the Beti area of southern Cameroon provide a significant example (Guyer, unpublished field notes).

Although many men could not afford bridewealth during the early 1960s, when the price of cocoa plummeted on world markets, they still fathered children, who were officially registered as *père inconnu* (father unknown), even when the community knew perfectly well who the father was. As the economy recovered, court cases involving official recognition of children suddenly picked up. Particularly interesting are the claims made for daughters, who were now reaching the age when parents might expect bridewealth on the occasion of their marriages. The temporary decline in marriage and the legal status of *pères inconnus* created a space in which men could be selective about the recognition and support they provided to their children. Most children from this generation may well have been claimed eventually; certainly the majority were materially supported to some degree. But fathers could now take a discretionary approach to their children through the official vital registration system.

New Pressures on Women

Just as recent changes appear to have given young men more independence in competing for sexual partners, women, too, enjoy new options. Still, married as well as unmarried women face sexual pressures, though they are altered from the past. For married women, an increase in men's sexual demands may impose more risks from pregnancy and childbirth in societies in which the age at marriage is very young. Patterns of initiating sexual relations slowly after marriage to a young bride may be disappearing, resulting in acute health risks for young women.

In The Gambia, a young woman declared that a husband may try to take possession of his bride sooner than in the past by withholding bridewealth until he gains full access, thereby forcing financially hard-pressed parents to turn over their daughter sooner than they would have in the past (Bledsoe, unpublished field notes, 1992). Of course, this strategy may have been used in the past as well. An alternative interpretation might investigate possible declines in older women's authority. In polygynous systems in which marriage was contracted during the wife's childhood or even during her infancy, the loss of older women's authority would leave husbands alone to make decisions about consummation and sexual frequency with very young brides. And in areas in which women's societies once took several years to initiate girls, the new demands of schooling, by cutting down the initiation time, may lessen the control older women have over the timing of young women's marriages.

Although married women may well feel the effects of the reduction in the age of full male sexuality, these effects appear to fall most heavily on unmarried women. They are compounded because the erosion of control over the sexuality of young males coincides with the new opportunities that

young women have to pursue careers outside the domestic sphere—opportunities that make them less eager to rush into marriage and childbearing.

CHANGES IN UNSANCTIONED BIRTHS

A key theme underlying this chapter has been the observation that the sexuality and fertility of men are as important to understanding childbearing as those of women. Adhering to strictures on sexual activity obviously required the compliance of men. Yet for obvious reasons, fertility studies usually accord women the most analytical attention, leaving men in the shadows. The limited information that we have about young men gives us more perspective on two things: the intensity of sexual demand on teenage women, and the likelihood that a father will recognize and support his children. Although adolescent boys are still considered too young for socially sanctioned reproduction, the more they enter full sexual activity, the more likely will their young partners bear children outside a sanctioned state, whether this consists of marriage, completed initiation, or paternal recognition.

As for the implications of these observations for the handling of premarital births, husbands and kin appear to be increasingly unwilling to acknowledge “illegitimate” children (see, for example, Launay, forthcoming). To understand why, we can profit by looking at the past. The evidence suggests that men were glad, on the whole, to have children, no matter who the actual father was. Ill-timed sexual experiences or illegitimate births could often be rectified or covered up by hasty marriages to young suitors or older polygynists. Today, having a premarital birth makes it difficult for a young woman to find a man willing to marry her, since she is stigmatized as promiscuous; in the past, such women would have easily found older men willing to marry them (Akong’a, 1988). To be sure, ranking and marginalization, processes that intrigued Kopjtoff and Miers (1977), were standard modes of operating in most precolonial contexts. Wives, chiefs, slaves, and children—all were ranked relative to each other in terms of power and resource allocation. Yet a child who was born under questionable circumstances, once ritually purified, could usually be incorporated into the family because of the general value people placed on children.

How does the past, as interpreted in these ways, compare to the present, as we know it? Ranking and marginalizing are critical phenomena in modern Africa as well, but they are profoundly underdocumented with respect to their demographic concomitants for women and children. Especially in countries experiencing economic deterioration, families may have to differentiate more sharply the opportunities available to their members. Not only do men appear less inclined to marry multiple wives; they also may be less interested in acknowledging all the children they father, at least in the short

run (see also Guyer, 1984, 1986b). It is unclear whether this decline in willingness to acknowledge social fatherhood stems from efforts to avoid the economic burdens of fatherhood, the problems of urban polygyny, or a substantially earlier age at full sexuality.

Some young women are trying to delay marriage and childbearing, and paternity is growing more costly for young men. Young men are gaining a certain degree of economic independence from gerontocratic control and perhaps even a sense of impunity for their actions. Yet they are not necessarily able, or willing, to support a wife or child. Africa has not developed in its cultural repertoire the idea of the utterly unknown and absent father familiar from the history of European illegitimacy. But in countries experiencing economic decline, it is not difficult to see how paternal support could attenuate to recognition alone, and recognition could attenuate still further into neglect for many offspring of adolescent fathers. Gyepi-Garbrah (1985b) confirms that in Nigeria, many fathers deny responsibility and disappear. (See Iliffe, 1988, for a stark picture of the life that marginal children can face in Africa.)

Having described some of the ways in which reproduction is legitimated through ritual preparation or learning, proven fealty to in-laws, or the acknowledgment of paternity, we turn to a new domain of preparation for adulthood that has received disproportionate research attention in fertility studies: formal schooling. Although past modes of preparation are increasingly being eclipsed to make room in childhood for schooling, Chapter 5 shows that the longstanding cultural emphasis on delaying parenthood to complete preparation for adult life persists with surprising vigor in this new cultural form, which has in effect become a new form of nonreproductive training for adult life.

Education and Adolescent Fertility

Any contemporary study of adolescent fertility inevitably confronts the topic of education. Throughout the world, formal schooling for women is the single most consistent correlate of their low fertility.¹ Yet within this general agreement is a question of perpetual contention: How, precisely, does education work this reproductive magic? Does it teach a woman Western scientific facts about reproduction and health, instruct her in the national language in which radio messages about contraception are broadcast, expose her to ideals of low fertility, extricate her from the authority of kin who demand high fertility, imbue her with career aspirations outside the home, embolden her to ask for contraceptives from intimidating family planning personnel or in the face of an irate husband? (For important reviews and statements, see Schultz, 1973; Leibenstein, 1974; Easterlin, 1975; Cochrane, 1979; Graff, 1979; Caldwell, 1982; Easterlin and Crimmins, 1985; Oppong and Abu, 1987; Cleland and Rodriguez, 1988.)

Though each of these mechanisms undoubtedly plays some role, con-

¹To be sure, some analysts have argued that in the early stages of socioeconomic development, increased education may be associated with higher rather than lower fertility levels (see, for example, Nag, 1979; Page and Lesthaeghe, 1981). Through association with better health, education may enhance fecundity; it may also erode indigenous controls on fertility such as extended breastfeeding and postpartum abstinence. Eventually, however, most analysts agree that female education (sometimes used interchangeably with literacy) is negatively associated with fertility.

vincing evidence to evaluate their various effects is virtually nonexistent. For Africa, these questions have undergone hardly any systematic scrutiny. In any event, as Graff (1979) cautions, it is easy to overestimate the virtues of Western education:

Education, regardless of level, is seen most often as a simplistic quantity/quality, which affects attitudes/behavior . . . in a linear . . . and overwhelmingly progressive way [p. 125].

Instead, the contributions of education and literacy

. . . should be viewed as less abstract and as more concretely dependent on contextual and structural correlates of the society under examination, as well as on the context and specific circumstances in which literacy is provided or acquired and the uses to which it is put . . . [p. 134].

Following Graff's lead, we attempt to address the question of education as concretely as possible in relation to fertility among adolescents in the African context.

This chapter and the next cover issues related to education (or, more broadly, training) and fertility. The first issue, covered in this chapter, concerns changes in formal education and why they are considered so important in the fertility equation.

Education is usually assumed to affect fertility, rather than vice versa, because women usually acquire education in their youth and bear children as adults, after their education has ended. By the logic of temporal order, education is assumed to have imprinted women in ways that make them substantially alter their lifetime reproductive behavior. Though this assumption itself is problematic, our more limited focus is not mature women, but adolescent women whose reproductive careers have hardly begun. The question of causation is further complicated by the fact that among adolescents, several critical events may be happening concurrently or in rapid succession. A schoolgirl may have struck up a sexual relationship, her elders may have begun negotiations for her marriage, and her work plans may still be vague. Sorting out a sequence of events—the end of education, the beginning of reproduction—in such a complicated situation may bring us no closer to establishing cause: Individuals often make decisions less in response to past events than in anticipation of future ones. Still, by singling out adolescents for consideration, we raise the possibility that the opposite causal direction may apply: Those young women who manage to avoid childbearing may gain the opportunity to obtain advanced schooling.

This chapter also examines whether education should be used to explain delays in adolescent fertility. We examine a variety of evidence that suggests that other factors may also be important in delaying entry into childbearing. The next chapter pursues this point as we consider other forms of training for adult life that may be significant in postponing childbearing.

THE "CULTURE" OF FORMAL EDUCATION: AN EXAMPLE FROM SIERRA LEONE

Although many African countries have low rates of enrollment in formal education, most people, both literate and illiterate, place enormous weight on the importance of schooling. We present a brief case study, that of Sierra Leone (Bledsoe, 1992), that gives a flavor of what can best be described as the culture of education in many African countries. To be sure, primary school enrollment rates in Sierra Leone are not unusually high, compared with those in other countries: The gross primary enrollment rate was 53 percent in 1988 (World Bank, 1988). Yet the country's modest enrollments only make it all the more compelling as a focus of study.

Sierra Leone has been called the "Athens of West Africa," because high-quality formal schooling was established there quite early. Reacting to the horrors of slavery, an Englishman named Granville Sharp laid out a plan in 1786 for helping freed slaves and their descendants in England by creating a blueprint for a perfect society in West Africa, in which no one's labor could be coerced. Inspired by this Utopian vision, an initial group of settlers seeking to establish such a society set sail in 1787 for Sierra Leone. The cornerstone for their experiment was education, and setting up schools became an immediate priority.

These historical events laid a powerful template for what can best be seen as the contemporary culture of education. Many young people today yearn to become educated in order to leave rural villages where farm work demands exhausting labor. They want to be literate; to wear well-tailored Western-style clothes; to speak English and Krio, the national *linguae francae*; and to acquire civil service or business jobs from which they can earn regular monthly wages, instead of relying on irregular seasonal harvests. The obstacles to realizing these ambitions, however, are myriad.

Students must compete aggressively for admission, especially to secondary schools. Even for those who obtain places, tuition and school expenses require diverting family income from medical treatment, farm loans, and food purchases. Among those who are less fortunate, boys may be sent to learn skilled occupations with trade masters or to learn Arabic with an Islamic scholar; girls may be kept at home or sent to other families to be trained in domestic or trading skills. Most rural girls marry by age 17.

In much of the country, a distinctive feature of a town of any size is the presence of local chapters of the region-wide secret Poro and Sande societies. For at least three or four centuries these societies have initiated local boys and girls, respectively, into their membership, and have claimed to control powerful knowledge from which low-ranked members and the uninitiated are excluded. The initiation period is considered a time of singular danger. If a female initiate must leave the enclosed "bush" temporarily, she

dons special ritual clothing and paints white chalk on her body to indicate that she is not at liberty to interact freely, especially with men, during her perilous liminal state.

Though the Poro and the Sande continue to initiate practically all local children, a town of any size also boasts a contemporary sign of the times: a primary school. Local people comment that the Western outsiders whom they encounter lead an easy life largely because of their knowledge of the outside world and its wondrous technology. Those who desire a higher standard of living strive to send their children to school to acquire this special knowledge. Such schools are quite humble physically, often merely an open-walled, mud-brick structure with a corrugated iron roof. Sitting tightly packed, four or five to a bench, children take up the day's lessons. Because of the cost of paper, pens, and chalk (several times the actual cost of what it is in the United States), students in rural schools may learn the alphabet by tracing letters in the air or outside on the sand. But the eagerness to learn is so palpable that most children persist in their studies even in the face of extreme hardship.

Larger towns may have several primary schools and perhaps a secondary school. But because the quality of education is considered crucial to a child's chances of success, many children living near schools with poor facilities or mediocre academic reputations leave to attend better schools. They live with relatives, friends, or patrons, and spend their free hours in the service of the household: caring for young children, cooking, cleaning, or hawking trade items.

The schools most children would like to attend, whether private or public or run by Christian or Islamic missions, are in cities, where the education industry thrives. City newspapers advertise "institutes" that tutor students for college entrance exams and companies that claim access to overseas scholarships. Islamic ritual specialists, many of whom have never attended Western schools, do a thriving business among secondary school students, selling potions that are proclaimed to seal into memory the welter of facts presented during class.

In better years in the past, most urban schools had ample supplies of books, paper, and chalk. Science labs were well equipped, and highly trained teachers were paid regularly. But even the memories of such halcyon days are dim. Since the early 1970s, education has been hard hit by economic problems, and opportunities for succeeding through education have been sharply curtailed. Even students who manage to finish secondary school, college, or professional school cannot be assured of finding good jobs. The number of white collar jobs in the national business and civil service bureaucracy has declined, and the qualifications required to compete for them have risen. Recession undermines the quality of even the wealthiest urban schools.

In the face of these economic woes, some evidence suggests that families' inclinations to send their children to school are ebbing (International Labour Organisation, 1989). Families complain about the cost of schooling and express growing doubts about their ability to afford it. Rarely does one encounter parents who vow to keep *all* their children in school. Instead, there is more talk of *which* child to invest in. Despite these mounting hardships, children's own aspirations to go to school have not abated. Indeed, what is perceived as a growing scarcity of white collar jobs, and an inflation of job requirements has only intensified the national culture of education.

Desires for schooling have produced a new seasonality: now, the annual cycle is as much affected by exam schedules and school holidays as by agricultural cycles. In September, the ferryboat crossing the harbor from Freetown to Lungi International Airport teems with older students from wealthy families heading off to boarding schools in Europe or the United States. Up-country, stores stock up on pencils, exercise books, and textbooks, and small tailor shops keep their apprentices working late to fill orders for uniforms. Throughout the day, children traveling from small villages with no schools to towns with schools climb out of dusty trucks. Clutching small valises or plastic bags filled with a few clothes, they make their way to the houses of the families who have agreed to take them in.

As the school term comes to an end and exam time draws near, students all over town hover over study papers on verandas or under trees after school. Those from wealthy families write on paper with ballpoint pens to practice for exams; others write on the ground or abscond with school chalk to write on large metal water bins behind houses. Studying goes on into the night. Dim kerosene lamps shine through the cracks of window shutters as tired students worry into the night.

After exams are over and the results announced, lorries and ferries fill again with children returning home with their all-important school report cards. During the holiday, many boys in secondary schools travel around the country, seeking money from relatives for school fees and expenses, making sure, if they did well, to bring their report cards with them.

Desires for schooling produce an extraordinary degree of child mobility even on a weekly basis. Walking through even the smallest village with no school can be a quite different experience, from one day to the next. Because many children are fostered out to attend schools in large towns nearby, a visitor during the week is likely to get the impression of a quiet village of adults and a few young children. On the weekend, the missing segments of the population pyramid suddenly appear: Chattering schoolchildren come home to help their families with farm work. Chairs and porches are draped with drying uniforms in the official colors of schools in distant towns. Whereas only local languages may be spoken in a village during the week,

on the weekend young voices show off new language skills by calling out teasing greetings to Western visitors in English.

For girls, education significantly changes their life prospects. Before education was available, a girl's training was directed toward her future roles as wife, farmer, and caretaker of children, and marriage confined her geographically and economically. Today, rural girls increasingly seek urban careers. Some go simply to be "trained" in domestic skills in urban households; others are trained in marketing. But many girls go to primary school, and a few go on to secondary school.

Almost without exception, girls entering secondary school have ambitions to go on to college or professional schools. But, although the number of girls and boys beginning primary school is now roughly equal, the proportion of girls declines rapidly as puberty approaches. Rural families support a girl's goals for advanced education with mild enthusiasm at best. Her labor is needed in the household, and her early marriage to a wealthy man may underwrite the education of her younger brothers. But because a daughter who remains in school becomes more desirable as a wife for an urban man, her family elders may risk leaving her there against the chance that she will become pregnant and be forced to drop out.

Schools are widely charged with keeping their students uncontaminated both by knowledge of, and experience in, reproduction while they prepare for adult life. Injunctions to avoid pregnancy permeate all aspects of school life, even down to the symbolism of a school uniform. Children who wear school uniforms are regarded with a mixture of respect and fear because of their potentials for achievement in the "civilized" world, with its esoteric mysteries and fearful powers. A girl's school uniform suggests that she is being prepared for marriage to a man of importance and as such should be treated with respect. More important, the symbolism attached to school uniforms, like attire worn by Sande society initiates, marks her as sexually unavailable. A teacher drew out these comparisons, implying that being pregnant and wearing a uniform are symbolically incompatible. For a schoolgirl who becomes pregnant,

. . . the girl will still be in town and will feel ashamed to wear a uniform and return to school Legally, there is no problem with that, but the parents [of other students] would probably get upset. The students have to dress in uniforms. And here is a girl who has been pregnant, attended [prenatal] clinic, and even goes through the market every time she wants to attend clinic, with a big stomach The school will be cast as a sort of . . . "big women's" school. That is, instead of school for children, you have schools for mothers.

Public resentment at a schoolgirl becoming pregnant is conveyed in the negative image of an unkempt school uniform. An older girl with a dirty,

torn uniform is suspected of having no one to watch over her properly, rendering her vulnerable to men who might tempt her with food and money.

The notion that reproducing is incompatible with training (Agouunké et al., 1990) helps to explain the intense disapproval of adolescent mothers continuing in school. Affirmed a teacher in rural Sierra Leone, "[t]he schools in Sierra Leone do not generally admit girls who have given birth: mothers. She is not considered a schoolgirl again [any more]" (quoted in Bledsoe, 1990:293-294). In The Gambia, the headmaster of a rural secondary school regularly admonished his female students about their responsibilities to avoid sexual activity. His policy was "no visiting 'friends' [lovers], no marriage, no pills while learning" (Bledsoe, unpublished field notes, 1991). Any girl suspected of being pregnant was sent to the local prenatal health center to be checked. If pregnancy was discovered, she was expelled from school. According to a young female graduate of this school, the headmaster's philosophy was, "If you just follow the boys, it means you don't want to learn." Schools have much to lose, she explained, by being too lenient. If the students begin to get pregnant it will become known as a "prostitute school." Families, particularly of good students, will withdraw their children, and the school's scores on national exams will plummet, along with its academic reputation.

LEVELS AND TRENDS IN FORMAL EDUCATION

How do these detailed observations about schooling in one country play out against the wider backdrop of facts about education of women across the continent? Obvious parallels exist in countries where secondary education for women has increased. The situation is likely to be quite different, however, in countries where few girls attend school.

School enrollments grew rapidly in the boom period from the 1960s to the 1980s (World Bank, 1988). Most African countries reported substantial increases in enrollment rates for primary school (the percentage of the relevant age group enrolled in primary school). As a result of this growth, those rates now exceed 90 percent in 13 of the 35 countries listed in Table 5-1. But despite these accomplishments, the average enrollment rate in sub-Saharan Africa remains lower than that on any other continent. In Burkina Faso, Mali, Niger, and Somalia, fewer than 30 percent of those in the relevant age group were enrolled in primary school in the early 1980s.

Table 5-1 also shows that secondary school enrollment rates are substantial in some countries but remain much lower than those for primary schools (as the differing definitions of low, medium, and so on, suggest). By the early 1980s, secondary school enrollment rates exceeded 50 percent in the Congo and Zaire. In 10 countries, however, fewer than 10 percent of the relevant age group were enrolled in secondary school in the early 1980s.

TABLE 5-1 African Countries by Percentage of Relevant Age Group Enrolled in Primary and Secondary School, 1983

Primary Enrollment				
Very Low (<30)	Low (30-49)	Medium (50-69)	High (70-89)	Nearly Universal
Burkina Faso	Burundi	Benin	Central African Republic	Angola
Mali	Chad	The Gambia	Côte d'Ivoire	Botswana
Niger	Ethiopia	Malawi	Ghana	Cameroon
Somalia	Mauritania	Rwanda	Liberia	Congo
		Senegal	Mozambique	Gabon
		Sierra Leone	Nigeria	Kenya
		Uganda	Tanzania	Lesotho
				Madagascar
				Swaziland
				Togo
				Zaire
				Zambia
				Zimbabwe

Secondary Enrollment ^d				
Very Low (<10)	Low (10-24)	Low (10-24)	Medium (25-49)	High (50+)
Burkina Faso	Angola	Kenya	Ghana	Congo
Burundi	Benin	Lesotho	Togo	Zaire
Chad	Botswana	Liberia	Swaziland	
Malawi	Central African Republic	Madagascar	Zimbabwe	
Mali	Cameroon	Mauritania		
Mozambique	Côte d'Ivoire	Nigeria		
Niger	Ethiopia	Senegal		
Rwanda	Gabon	Sierra Leone		
Tanzania	The Gambia	Somalia		
Uganda		Zambia		

^dIncludes middle schools that require only four years of education.

SOURCE: World Bank (1988:Tables A-7, A-8, pp. 131-132).

Secondary school enrollment grew faster from 1960 to 1980 than did primary school enrollment: 13.8 versus 6.6 percent (World Bank, 1988).

Enrollment rates of girls are lower, in general, than those of boys. In 1970, 32 percent of girls and 63 percent of boys aged 6-12 were in primary school in Africa (World Bank, 1988); by 1980 the percentages had increased to 58 percent and 87 percent, respectively. Although girls account for 40 to 50 percent of primary enrollees in most countries, in Benin and Chad no more than a third of the primary school students are girls (see Table 5-2).

TABLE 5-2 Girls as a Percentage of Total School Enrollment, 1960, 1970, 1983

Country	Primary			Secondary		
	1960	1970	1983	1960	1970	1983
Angola	33	36	46	40	42	33
Benin	28	31	33	27	30	28
Botswana	59	53	53	48	46	54
Burkina Faso	29	37	37	27	28	34
Burundi	24	33	40	37	20	37
Cameroon	33	43	46	17	29	38
Central African Republic	19	33	35	15	19	26
Chad	11	25	27	7	8	15
Congo	34	44	49	28	30	41
Côte d'Ivoire	26	36	41	12	22	29
Ethiopia	24	31	38	14	25	36
Gabon	38	48	49	16	29	40
The Gambia	31	31	38	26	24	31
Ghana	35	43	44	27	38	37
Kenya	32	41	48	32	30	40
Lesotho	62	60	53	53	54	60
Liberia	29	33	40	16	23	29
Madagascar	44	46	48	33	40	44
Malawi	36	37	42	22	27	29
Mali	28	36	37	17	22	28
Mauritania	19	28	39	5	11	24
Mozambique	38	34	43	36	38	30
Niger	30	35	36	17	27	27
Nigeria	37	37	n.a.	21	32	n.a.
Rwanda	31	44	48	35	33	34
Senegal	32	39	40	27	29	33
Sierra Leone	34	40	41	27	28	28
Somalia	25	24	36	9	16	34
Swaziland	50	49	50	45	44	49
Tanzania	34	39	49	32	29	35
Togo	28	31	39	23	22	25
Uganda	32	40	43	21	25	33
Zaire	27	37	43	24	22	28
Zambia	40	45	47	23	33	36
Zimbabwe	45	45	48	36	39	40

NOTE: n.a. = not available.

SOURCE: World Bank (1988:Table A-1, p. 125).

Sex imbalances in enrollment rates intensify at the secondary and university levels. In 1970, 2 percent of women and 6 percent of men aged 18-23 were enrolled in secondary schools or universities. The corresponding percentages for 1980 were 5 percent and 11 percent (Gyepi-Garbrah, 1985a). Table 5-2 shows that by 1983, the proportion of girls among secondary school students exceeded 40 percent in only 8 of the 35 countries listed. The southern region stands out as having relatively high levels of girls in secondary schools. High levels of male labor migration may be part of the explanation.

Despite overall increases in secondary education, the World Bank (1988) reports, increases in primary school enrollments slowed between 1980 and 1983, and in several countries (Togo, Somalia, Tanzania, Liberia, and Nigeria) total enrollment declined. Between 1960 and 1980, increases in secondary school enrollment rates also tapered off in several countries; and in a few countries, such as Angola, Liberia, and Togo, the numbers enrolled in secondary schools actually declined. Economic crisis and the implementation of structural adjustment programs are likely central factors. In several countries the percentage of gross national product (GNP) expended for education declined markedly in the early 1980s. In Botswana, Cameroon, Congo, Ghana, Somalia, Tanzania, Uganda, and Zambia, such declines began as early as 1975 (World Bank, 1988).

It is too early to tell how these cuts in expenditures have affected either total levels of educational attainment or sex imbalances in education in these countries. So far, according to Demographic and Health Survey (DHS) data from the late 1980s, there has been little obvious decline in the levels of female education (see Table 5-3). Still, the fact that in Liberia and Togo, women aged 15-19 have lower literacy rates than women aged 20-24 may indicate that increases in female education are tapering off (Liberia's case must be assessed carefully, however, because political strife since 1980 has likely disrupted schooling.)

The quality of schooling is allegedly decreasing as well (see, for example, World Bank, 1988), though it is difficult to document this change reliably. Still, public perception is that the quality as well as the availability of education is suffering. The following statements are representative:

School kids to roam streets: More than 40,000 school children in Nigeria's Gongola State will not be able to enter secondary schools in September because of lack of state funds. The Government has said that only 12,607 of primary school pupils eligible for secondary education would be admitted due to the State's limited resources [*Concord Weekly*, Nigeria, July 27, 1984, p. 13].

In Uganda a Light of Learning Dims: [An article that documents the financial hardship of students and faculty. *New York Times*, January 24, 1991.]

TABLE 5-3 Highest Level of Formal Education Attained, Women Aged 15-19 and 20-24, Selected Sub-Saharan African Countries: Percentage in Age Group

Country	Primary or Higher		Secondary or Higher	
	15-19	20-24	15-19	20-24
Botswana	95	85	38	35
Burundi	27	22	1	3
Ghana	81	69	60	54
Kenya	95	92	21	35
Liberia	63	52	22	31
Mali	24	18	0	2
Nigeria	66	58	34	31
Senegal	32	29	14	11
Togo	62	55	16	18
Uganda	79	70	12	14
Zimbabwe	98	93	50	51

SOURCE: Demographic and Health Surveys Standard Recode Files, weighted data.

In South Africa, a "Lost Generation": Schooled only in struggle, the young ponder their future. [An article that documents the loss of education of the generation that took part in the Soweto school boycotts. *New York Times*, September 19, 1990.]

EDUCATIONAL INFLUENCES ON ADOLESCENT FERTILITY

This section discusses the influence of education on fertility. However, the causation can also run in the other direction, that is, adolescent fertility can affect education. We consider both possibilities in turn.

Some studies report a curvilinear relationship between fertility and education: high fertility among women with no education, even higher among those with some primary education, and lowest among those with secondary education (Cochrane, 1979; Gyepi-Garbrah, 1985a; Agouunké et al., 1990; République de Côte d'Ivoire, 1990; République du Cameroun, no date). But most studies conclude that fertility declines significantly as education increases. How adolescent fertility fits the contours of this generalization is less clear.

The Demographic and Health Surveys include data on the highest level of school attended: none, primary, secondary, or higher. Questions on other forms of education such as trade apprenticeships and ritual initiations were not included. Table 5-4 shows the percentage of women aged 20-24 at the time of the surveys in DHS countries who gave birth before age 20, by

TABLE 5-4 Percentage of Women Aged 20-24 Who Gave Birth Before Age 20, by Educational Level, Selected Sub-Saharan African Countries

Country	Highest Level of Education Attained			Total	Sample Size
	None	Primary	Secondary or Higher		
Botswana	62	61	43	55	926
Burundi	28	26	22	27	779
Ghana	61	51	16	51	867
Kenya	76	69	38	58	1,320
Liberia	61	72	64	64	1,030
Mali	60	63	^a	67	530
Nigeria	72	56	27	54	1,676
Senegal	69	40	29	59	895
Togo	69	53	32	56	661
Uganda	74	71	40	68	985
Zimbabwe	68	71	28	49	840

^aFewer than 25 cases.

SOURCE: Demographic and Health Surveys Standard Recode Files, weighted data.

level of education. Almost all the countries show a predictable negative relationship between the highest level of formal education received and giving birth as teenagers: In general, the percentage of teenage mothers is slightly lower among those with primary education than among those with no education. Women with secondary or higher education are much less likely to have given birth as teenagers. In all countries except Liberia, most women with secondary education began childbearing after reaching age 20. The sharp discontinuity in percentages of teenage mothers between women with primary school and secondary school is not surprising because many girls drop out at precisely this point. One of the reasons is that families commonly find husbands for their daughters at this time. Another is that whereas primary education is free or low cost in many countries, the expenses required of a family to support a student rise sharply in secondary school.

DHS results for women aged 15-24 reveal a strong relationship not only between education and fertility but between education and fertility goals. These results (not shown) indicate that women of secondary or higher education would be least enthusiastic about becoming pregnant in the near future, and they report smaller ideal family sizes than do less educated women.

By what mechanisms, then, does education of women produce such apparently clear fertility results among adolescents? One commonly cited

way is simply by raising the age at first marriage for women, which in turn may lead to a later start in childbearing, and hence to lower levels of fertility among adolescents (see, for example, Gyepi-Garbrah, 1985b; Division of Family Health/GTZ Support Unit, 1988). As shown in Chapter 3 (Table 3-6), in all DHS countries women with secondary or higher education are indeed less likely to marry before 20 than are less educated ones. Families appear to be increasingly willing to delay giving their daughters to husbands in order to boost the girls' educational cachets. Hence, it may be more accurate to say that desires for education—among both families and daughters—produce lower fertility, rather than education itself.

Another often-discussed way in which education may act upon adolescent fertility is through influencing values. Formal education has been charged with eroding deeply ingrained cultural or familial constraints on premarital sexual relations (Cherlin and Riley, 1986; Worthman and Whiting, 1987; Division of Family Health/GTZ Support Unit, 1988; Adekun, 1990). Education may also expose women to Western ideals of romantic love with one partner (what Caldwell, 1982, called "emotional nucleation") and to greater sexual autonomy for women, both of which may lead to earlier ages at first sexual experience and more frequent sexual encounters. As Table 3-7 has shown, more educated women aged 20-24 are more likely to report premarital sexual activity. The principal reason, of course, is that more educated women tend to delay marriage and have more exposure to risk. However, education may change young women's values from those of high fertility to low fertility or allay their misgivings about birth control. And education undoubtedly plays an indirect role in generating social disapproval for early pregnancies.

Another possible route of fertility influence for education is that of imparting knowledge. The most obvious kind of knowledge that girls might obtain in school that would induce them to avoid pregnancy is "family life" instruction. Certainly in the past, but also today, there was considerable resistance to teaching girls about reproduction in school because such instruction might encourage licentiousness. Nowadays, many teachers and families agree in principle, as do adolescents themselves, that population and family life education should be taught in schools. Yet there is considerable debate about who should teach adolescents, what they should be taught, and when they should be taught which information. Whereas education authorities often fear parental opposition to family life education courses, families are divided: Some want to retain the responsibility; others argue that it is the school's duty (National Institute of Development Research and Documentation, University of Botswana, 1988).

Official policies in a number of countries still restrict family life education. Until recently, for example, several francophone countries rationalized these restrictions by citing laws based on the French anticontraception

law of 1920, which prohibited "antinatalist propaganda" (Senderowitz and Paxman, 1985).

But despite the often bitter disagreement over such sensitive issues, most African countries, as Table 5-5 shows, have introduced courses in the primary and particularly in the secondary school curriculum (Gyepi-Garbrah, 1985b; Senderowitz and Paxman, 1985; Gachuhi, 1986; Centre for Development and Population Activities, 1988; Kiragu, 1988; Liskin et al., 1989; Mashalaba, 1989; Haider, 1990; Nigerian Educational Research and Development Council, 1990; Ukaegbu, 1990). These courses cover reproduction, family life, and (occasionally) contraception. Reproduction and family life education courses are seldom taught at the university level, and only a few countries (Angola, Liberia, Mozambique, Nigeria, Sierra Leone, Somalia, Uganda, and Zambia) offer them in teacher training colleges.

No assessments have yet been made about how effectively these programs prevent pregnancies. Because few girls go on to secondary schools, where most family life education is introduced, it would be difficult to claim that such programs significantly affect adolescent fertility. Indeed, the percentage of women in Botswana who said they dropped out of secondary school because of pregnancy was almost identical to the percentage of pregnancy-related primary school dropouts (see Table 5-6). Even within secondary schools, information specifically on family planning may come quite late in the curriculum series. In The Gambia, family planning information is introduced only in the third year of secondary school (Mary Hafna, personal communication).

Furthermore, the extent to which family life programs are actually implemented and the amount of information they cover vary considerably. In Nigeria, few secondary school teachers actually know much about the subject outside their own informal sources (Nigerian Educational Research and Development Council, 1990); similar results were found in Kenya (Division of Family Health/GTZ Support Unit, 1988; Ferguson et al., 1988). Nigerian secondary school teachers also complain of inadequate resource materials and of insufficient time for family life lessons. Family life subjects are seldom included in national exams, a fact that decisively reduces both students' and teachers' interest in them (Dynowski-Smith, 1989; Ukaegbu, 1990).

Besides family life education per se, schools offer other kinds of information that might help girls to delay fertility. How effective is information about physiology in this effort—for example, about when during the menstrual cycle a pregnancy is most likely to occur? Data from DHS respondents aged 15-24 give at best an indirect answer to this question. Table 5-7 indicates clearly that women with more education have greater knowledge on this subject. However, in the late 1980s, fewer than one in four women aged 15-24 still had accurate information. Knowledge is somewhat better

TABLE 5-5 Population/Family Life Education Programs in African Countries, by Level of Incorporation in National Education System

Country	Primary Level	Secondary Level	Teachers' Colleges	University Level	Program in Progress
Angola	X	X	X		
Benin	X	X			
Botswana ^d					X
Burkina Faso	X	X			
Burundi	X	X			
Cameroon					X
Central African Republic	X	X			
Chad	X	X			
Congo	X	X			
Côte d'Ivoire	X	X			
Ethiopia		X			
Gabon					X
The Gambia					X
Ghana					X
Kenya		X			
Lesotho					X
Liberia	X	X	X		
Madagascar	X	X			
Mali	X	X			
Malawi					X
Mauritania	X	X			
Mozambique	X	X	X	X	
Niger	X	X			
Nigeria	X	X	X	X	
Rwanda	X	X			
Senegal					X
Sierra Leone ^b	X	X	X		
Somalia	X	X	X		
Tanzania	X	X			
Togo	X	X			
Uganda		X	X		
Zaire	X	X			
Zambia		X	X		
Zimbabwe					X

^dMashalaba (1989:17) claims that family life education has been introduced in both primary and secondary schools in Botswana.

^bSenderowitz and Paxman (1985:28) write that in Sierra Leone education on sexuality is included only in the secondary school curriculum.

SOURCE: Adapted from Ukaegbu (1990).

TABLE 5-6 Pregnancy-Related School Dropouts, Botswana, 1988

Characteristic	Percentage of Women Who Attend School	Women Who Left School Because of Pregnancy		Percentage that Subsequently Returned	Sample Size
		Number	Percentage		
Age					
15-19	95	91	13	22	706
20-24	85	82	13	16	640
25-29	70	65	14	18	467
30-34	66	59	18	19	333
35-39	66	43	19	20	233
40-44	67	20	14	13	147
45-49	52	18	16	16	109
Place of Residence					
Rural	71	236	14	19	1,749
Urban	87	141	16	18	877
Education					
Primary	100	242	14	20	1,731
Secondary or higher	100	135	15	17	904
Religion					
Christian	80	310	15	18	2,080
Traditional or none	65	66	12	22	552
Total	76	377	14	19	2,635

NOTE: Covers only women who ever attended school.

SOURCE: Botswana Demographic and Health Survey Standard Recode File, weighted data.

TABLE 5-7 Knowledge of Fecund Period and Ever-Use of Contraceptives by Education and Weekly Listening: Percentage of Women Aged 15-24

Characteristic and Country	Level of Education			Listens to Radio	
	None	Primary	Secondary and Higher	Yes	No
Knowledge of Fecund Period					
Botswana	1	3	8	4	2
Burundi	15	23	70	22	16
Ghana	18	29	55	32	21
Kenya	18	20	34	25	18
Liberia	5	5	14	8	3
Mali	10	19	^a	13	11
Senegal	5	15	40	11	6
Togo	15	34	64	40	21
Uganda	6	10	27	15	17
Zimbabwe	4	5	13	n.a.	n.a.
Ever-Use of Contraceptives					
Botswana	43	56	68	42	60
Burundi	21	23	46	27	20
Ghana	22	29	64	41	27
Kenya	31	20	53	43	30
Liberia	10	5	61	27	10
Mali	15	19	^a	21	15
Senegal	32	15	38	31	37
Togo	67	34	74	71	65
Uganda	11	10	47	31	16
Zimbabwe	65	5	46	n.a.	n.a.

NOTE: n.a. = not available.

^aFewer than 25 cases.

SOURCE: Demographic and Health Surveys Standard Recode Files, weighted data.

among women who attended primary school than among those with no formal education. But in most countries significant increases in reproductive knowledge do not appear until secondary school.

To be sure, education does not always improve knowledge about reproduction. In Botswana, Liberia, and Zimbabwe, only about one in ten women with secondary or higher education could identify the fecund period. And in teacher training colleges in Kenya fewer than 60 percent of the women in the sample of trainees could identify that period (Ferguson et al., 1988), though they knew more about reproduction than did uneducated women.

School, of course, is not the only source from which women can learn how to prevent unwanted births. Friends, health clinics, women's associa-

TABLE 5-8 Percentage of Women Aged 15-19 and 20-24 Who Listen to the Radio Weekly and Who Remember Hearing a Family Planning Message

Country	Listens to Radio Weekly		Heard Family Planning Message	
	15-19	20-24	15-19	20-24
Botswana	79	81	n.a.	n.a.
Burundi	33	31	n.a.	n.a.
Ghana	45	51	n.a.	n.a.
Kenya	72	78	65	76
Liberia	70	74	n.a.	n.a.
Mali	52	50	n.a.	n.a.
Nigeria ^d	71	74	n.a.	n.a.
Senegal	66	74	n.a.	n.a.
Togo	30	35	n.a.	n.a.
Uganda	39	43	n.a.	n.a.
Zimbabwe	n.a.	n.a.	7	10

NOTE: n.a. = not available.

^dFigures for Nigeria refer to Ondo State only.

SOURCE: Demographic and Health Surveys Standard Recode Files, weighted data.

tions, husbands, can provide such information as well. A potentially rich source of information is the media (Senderowitz and Paxman, 1985; Gachuhi, 1986; Barker and Rich, 1990; Piotrow et al., 1990; Barker et al., 1991). In most African countries, radio broadcasts reach much of the young adult population aged 15-24. In countries such as Ghana, Kenya, Mali, and Nigeria, family planning and health messages are broadcast regularly on the radio and/or television, often in local languages or through drama or musical performances (République du Mali, 1988; Rimon et al., 1988; Church and Geller, 1989; Piotrow et al., 1990). Table 5-8 displays the percentages of women aged 15-19 and 20-24 who report that they listen to the radio weekly and, for two countries only, remember hearing a family planning message. The crucial question, of course, is how listening to the radio may affect reproductive knowledge.

Taking first the issue of knowledge, the DHS results displayed in Table 5-7 confirm that women aged 15-24 who listen to the radio weekly have more accurate knowledge of the fecund period than those who do not. The results also show that there is much more knowledge among secondary school attendees than among radio listeners. However, in almost all countries, women who listen to the radio weekly know the fecund period as

accurately as do women who attended primary school, if not more so. In fact, in some instances, the radio messages are more effective than secondary or higher education. In separate calculations for Ondo State, Nigeria, women who listen to the radio weekly are slightly more knowledgeable about the reproductive cycle than women with secondary or higher education—about 22 and 20 percent, respectively.

Associations in the DHS data between radio listening and use of contraceptives are even more striking than those for knowledge about reproduction. In most countries, women from 15 to 24 who listened to the radio were far more likely than primary school attendees to have used contraceptives. The Kenya DHS pressed further, asking women specifically whether they had heard family planning messages on the radio. Our calculations (not shown) revealed that at every educational level, women who reported hearing family planning messages on the radio were more likely than those who did not to know the fecund period and to use contraception. In fact, women with secondary or higher education who reported they had not heard radio family planning messages were only slightly more likely to use contraceptives than women with no education at all who heard these messages.

It is by no means clear, of course, that radio messages actually teach women about reproduction or induce them to use contraception. These results simply suggest that the content of formal education, at least through primary school and quite frequently through secondary school, may be less effective than conventional wisdom suggests in changing reproductive behavior or in imparting knowledge of the reproductive cycle.

Clearly, women's behavior concerning fertility, as well as their reproductive knowledge and contraceptive use, vary with their education. However, many of the differentials presented above underscore the presence of threshold effects between primary and secondary school education in Africa. Because women with secondary schooling or more still account for only a small proportion of African women, the influences of formal education on adolescent fertility should not be overemphasized.

WHY DO SCHOOLGIRLS BECOME PREGNANT?

The earlier description of Sierra Leone suggested that schoolgirls should be off limits sexually. Yet schoolgirls do become pregnant, with what some regard as shocking frequency. Regardless of her age, many African societies view a girl as an adult, or at least a non-child, after she gives birth: They expect her to assume adult responsibilities and to terminate her education (Mwateba et al., 1988). Most students have been sent to school less to better themselves as individuals, than to serve as representatives of families that seek to better themselves. A family may have sacrificed a great deal to educate one child out of a set of siblings, and may have spent considerable

time selecting and preparing that child. For a girl who carries such hopes, pregnancy is a serious family tragedy. Why, then, do such pregnancies occur?

Some researchers posit poor school performance as a prime cause of pregnancy-related school dropouts. In a Kenyan study more than one in three of the girls in the bottom 25 percent in school achievement dropped out because they were pregnant, compared with only one in seven of the best students (Division of Family Health/GTZ Support Unit, 1988). The difference may arise because poor students must repeat classes, thus exposing them to the risk of pregnancy for a longer period. But it is mainly those girls who do not perform well in school, whether because of poor ability or the press of chores at home, who have the least to gain from staying in school (Division of Family Health/GTZ Support Unit, 1988). Some low achievers may deliberately try to become pregnant in order to drop out of school (National Institute of Development Research and Documentation, University of Botswana, 1988; Dynowski-Smith, 1989). Again, however, separating poor achievement from economic handicaps is difficult. In Kenya community-funded ("Harambee") secondary schools, which typically enroll students from poorer families, had pregnancy-related dropout rates more than twice as high as government-maintained and private schools (Division of Family Health/GTZ Support Unit, 1988). Another piece of evidence that supports the argument for economic hardship is that boarders and students in girls-only schools in Kenya had lower dropout rates than did day students and those in coeducational boarding schools, even though boys and girls are housed separately (Division of Family Health/GTZ Support Unit, 1988).

Related to economic hardship and academic difficulties is a final source of schoolgirl pregnancies: "sugar daddies." Secondary education, especially, requires substantial commitments of cash for school fees, uniforms, books, school supplies, and examination fees. Because families usually place priority on boys' educations, girls are less able to buy essential materials; so to help finance their education, some girls strike up sexual relationships with wealthy older men, their sugar daddies, who may provide places to live and money for food, as well as school fees and expenses (Busia, 1950; Schapera, 1971; Dinan, 1983; Prandon and Bledsoe, 1988; Brokensha, 1988). The payoff is judged worth the risk of becoming pregnant because the financial support that girls receive allows them to remain in school, as long as they can avoid pregnancy (see, for example, Acquah, 1958, for Accra). Akuffo (1987), studying a small Ghanaian town, found that about 93 percent of girls aged 15-19 had boyfriends who were employed, including some teachers (see also Bleek, 1976). So common has the sugar-daddy pattern become, that in rural Ghana over the last 40 years, the basis for imposing fines on men for pregnancy has been shifted from adultery to relations with schoolgirls (Vellenga, 1974).

There is some danger in overestimating the prevalence of the sugar-daddy syndrome. Schoolgirls are a highly visible and countable subsection of the female population, and families are understandably vocal about losing their return on years of school fee payments in cases of pregnancy. Yet, we cannot assume that the syndrome is everywhere a major cause of school pregnancy. The Kenyan Ministry of Health reports that schoolboys are responsible for most schoolgirl pregnancies in that country (Division of Family Health/GTZ Support Unit, 1988). Nor can we assume that sugar daddies always provide much support. Because parents usually pay most of girls' costs during their training, it may be ancillary expenses—clothes, uniforms, and pocket money—that are earned through sexual companionship (Akuffo, 1987). Even in Botswana, where most schoolgirls' lovers were adult men and not their schoolmates, only 11 percent of all mothers of out-of-wedlock children reported receiving support (National Institute of Development Research and Documentation, University of Botswana, 1988). But, the tremendous intercountry and intracountry variation in the frequency of sugar-daddy-schoolgirl situations makes it difficult to draw any general conclusions from the limited information cited for one or two countries.

EFFECTS OF ADOLESCENT FERTILITY ON EDUCATION

Trying to untangle the causal relation between fertility and education is not an easy task. Earlier we presented evidence that educational attainment affects fertility desires and behavior, as well as contraceptive use. Yet the preceding section described some strong evidence that adolescent fertility also affects educational attainment.

In the past, when girls had few expectations of formal education, pregnancy posed little disruption in a young woman's life course. Pregnancy was, and still is, encouraged, especially in areas where women marry young. Nowadays, pregnancy decisively mars the prospects of girls who hope to pursue their education. In countries where secondary education is a real option, a schoolgirl may walk a fine line between pregnancy and motherhood, on the one hand, and, on the other, finishing an education, obtaining a prestigious urban job, and marrying a monogamous man. The widespread perception is that a girl who becomes pregnant in school and drops out may have to accept a low-paid job, enter a premature marriage, or become the head of an impoverished household, relying on meager assistance from her family and the children's fathers. Gyepi-Garbrah (1985a:22-23) writes:

The plight of pregnant schoolgirls in Africa is particularly wrenching. They must either terminate their pregnancy by taking recourse in abortion in order to continue their education, or drop out of school either on their own volition or on pain of threatened official expulsion When girls drop

out of school because of pregnancy, their future socio-economic prospects are significantly reduced.

Stories in the popular press frequently confirm that having a child effectively terminates a girl's education (Akuffo, 1987; Bledsoe, 1990). Interview data suggest that many local people hold this perception as well. One young Nigerian woman stressed that parents discourage sex for their adolescent daughters "[b]ecause the parents want them to finish school" (quoted in Hollos and Leis, 1989:121). Kenya is another country where advancement in education may be contingent on low fertility. Most teacher training colleges reportedly use pregnancy screening as a prerequisite to admission, although this practice is extremely controversial even among the staff (Ferguson et al., 1988). The more common way in which fertility affects education is that girls who become pregnant drop out of school, often through pressure from explicit policies that expel them and discourage them from returning after giving birth (République du Mali, 1988; Adje, 1992).

Numerical evidence, though spotty, supports these observations that early fertility precludes further education. Botswana was the only DHS country that included a direct question about whether a woman had dropped out of school because of a pregnancy. Reproduced in Table 5-6, these Botswana results show that 14 percent of primary school attendees and 15 percent of secondary school attendees had dropped out because of pregnancy—estimates that are probably low. Among the primary school dropouts, only 20 percent subsequently reenrolled, and only 17 percent of secondary school dropouts did so.

A number of studies concur that many young women drop out of school as a result of pregnancy (Gyepi-Garbrah, 1985a). In Kenya, a study conducted in 1985 estimated that about 10 percent of female students drop out of secondary school because they are pregnant (Division of Family Health/GTZ Support Unit, 1988; Barker and Rich, 1990). In 1986, 11,000 Kenyan girls dropped out as a result of pregnancy (Kiragu, 1988). In the Machakos area, 27 percent of families reported having a teenage daughter who dropped out of school because of pregnancy (Maggwa, 1987, cited in Division of Family Health/GTZ Support Unit, 1988). In Mali, in the years 1983-1987, 10 percent of female secondary school students were dismissed because of pregnancy (République du Mali, 1988); and in Zambia it is estimated that 2 percent of all primary and secondary schoolgirls were expelled from school because of pregnancy (Senderowitz and Paxman, 1985). (For Ghana, see Akuffo, 1987; and Oppong and Abu, 1987.) Pregnancy-related dropouts are widespread even at advanced levels. A survey of women in Kenya's teacher training colleges indicated that annual pregnancy-related dropout rates among enrolled women students were 7.1 percent in 1986 and 6.4 percent in 1987 (Ferguson et al., 1988).

Pregnancy rates, of course, exceed dropout rates due to pregnancy. Some girls who become pregnant near the end of their courses are allowed to complete their programs (Ferguson et al., 1988; Hoillos and Leis, 1989). But many cases of schoolgirl pregnancies go unrecorded. Some girls withdraw quickly from school on other pretexts when they discover their pregnancies and go to live with distant relatives. They return after giving birth, leaving the baby with the relatives.

The most controversial fate of many schoolgirl pregnancies is abortion. A number of girls reportedly resort to this strategy to avoid detection and expulsion (see, for example, Bleek, 1978; Gyepi-Garbrah, 1985a; Senderowitz and Paxman, 1985; Nichols et al., 1986; Akuffo, 1987; Nichols et al., 1987; République de Côte d'Ivoire, 1990). Because a substantial proportion of young women conceive while at school or training institutions, the option of abortion is an important factor in their educational prospect. (Oppong and Abu, 1987).

Although most girls must drop out when their pregnancies are discovered, what are their prospects for resuming education? Some countries have relatively accommodating policies concerning the readmission of young women who have been pregnant or given birth. In Kenya, schoolgirls who become pregnant are required to discontinue their studies for at least a year (Ferguson et al., 1988). Policies in many countries are much stricter; they decree that pregnant schoolgirls be expelled permanently. Table 5-9 summarizes the available evidence on policies related to schoolgirl pregnancy in eight sub-Saharan countries. All eight favor some form of expulsion, in many cases without provision for reentry after giving birth.

Even in the most liberal countries, a combination of policies, economic circumstances, and informal social pressures discourages all but the most advanced or determined students from reenrolling after a pregnancy. A few countries allow girls who have given birth to apply for readmission or for admission to a school other than the one they left (Gyepi-Garbrah, 1985a). But few girls do so. In Botswana, the DHS revealed, fewer than 20 percent return to school after a pregnancy. Part of the reason is that in rural areas with widely scattered schools, the policy of requiring adolescent mothers to apply to other schools would force most girls to move to other towns, leaving their families to care for the child (Dynowski-Smith, 1989). Gyepi-Garbrah (1985a:22-23) elaborates other reasons:

The problems involved in obtaining admission into another school and in caring for a child without sufficient backup support, are usually too demanding and expensive for the teenage mother. The very few who secure admission lose one year and thus, may not qualify to enter the very good secondary schools because of age restrictions in the selection process.

Child care itself imposes constraints on many would-be returnees. In theory, young mothers might return to school after giving birth by leaving

TABLE 5-9 Policies Related to Schoolgirl Pregnancy, Selected Sub-Saharan African Countries

Country and Study	Policy
Botswana	
National Institute of Development Research Documentation, University of Botswana, 1988	Pregnant schoolgirls are required to discontinue education for at least one year, and cannot return to the same school. Teacher training colleges have similar practices but girls may return to the same college. The University of Botswana does not require pregnant girls to drop out.
Dynowski-Smith, 1989	Pregnant schoolgirls are required to discontinue education for at least one year and cannot return to the same school. The Ministry of Education's policy is that a married person cannot attend primary or secondary school.
Kenya	
Ferguson et al., 1988	Pregnant schoolgirls are required to discontinue education for at least one year. Most teachers oppose the idea of readmitting girls who dropped out because of pregnancy because they are a bad role model for other girls. Most colleges use pregnancy screening as a prerequisite for admission.
Division of Family Health/GTZ Support Unit, 1988	
Ferguson et al., 1988	
Liberia (Monrovia)	
Nichols et al., 1987	Most secondary schools do not allow pregnant girls to continue their studies.
Gyepi-Garbrah, 1985a	Pregnant schoolgirls are allowed to transfer to night school.
Mali	
République du Mali, 1988	Primary and secondary schoolgirls who become pregnant are expelled. Girls in the lycées are allowed to return to school after one year. Married persons are not admitted to primary and secondary schools, but they are admitted to professional secondary schools.
Nigeria	
Nichols et al., 1986	Most schools require pregnant girls to drop out.
Senderowitz and Paxman, 1985	Expulsion.
Tanzania	
Ferguson et al., 1988	Expulsion (also for boys).
Mwateba et al., 1988	Dar-es-Salaam Youth Center established in 1986 to assist pregnancy-related dropouts.
Togo	
Agoonké et al., 1990	Pregnant girls are required by law to drop out of school.
Zambia	
Senderowitz and Paxman, 1985	Expulsion.
Zambia (Lusaka)	
Standing and Kisekka, 1989	Expulsion.

their babies with their families, but there is little evidence that they do so. Are female students who are mothers, few though they be, more likely to have children living away than are their peers who do not go to school? Unfortunately, though many of the young women aged 15-19 in some countries must have been students, neither the World Fertility Survey nor the Demographic and Health Survey asked them (or other women) whether they were still in school. A few individual surveys, however, provide some evidence. Surprisingly, according to a study in Côte d'Ivoire, 30 percent of schoolgirls who dropped out because of pregnancy returned after the delivery (République de Côte d'Ivoire, 1990); but most of those who returned reported that they could do so only because their parents or their partner's parents had been able to take care of the child. Some young women may not have such fostering opportunities. Although pregnant schoolgirls in Monrovia, Liberia, were allowed to transfer to night school, few could do so because of childcare difficulties (Gyepi-Garbrah, 1985a; see also Oppong and Abu, 1987).

Whereas strict policies limit educational achievements, informal social pressures may be equally effective. As a young woman in Sierra Leone related, people often taunt an adolescent mother who tries to return to school, and use her past to shame her:

When you get pregnant, that is virtually the end of your schooling. Of course, you can now try to come back to the same school, but sometimes you will get mocked, making you very afraid to come back Others will taunt [you], saying "*koi-ma*" [literally, "stomach-on," referring figuratively to a woman who has borne a baby]. [Quoted from Bledsoe, 1990:294.]

Clearly, when childbearing begins, education usually stops. Women who begin to bear children young will have little chance to continue their education. Conversely, women who delay childbearing—whether they use abstinence, abortion, or contraception—or soften its consequences by fostering out their infants, can continue their education.

It is important to reiterate that there is tremendous heterogeneity among African countries in the number of teenage girls who attend school. Although cases of pregnancy-related school dropouts draw considerable publicity, in some countries the total number of cases may be quite small. On the other hand, the number of pregnancy-related dropouts is larger than we might suspect if we confined the analysis to secondary school students: Because of liberal age guidelines for enrolling in school in many countries, many teenage school-girls are still in primary school. These girls run similar risks to those of their age peers in secondary school.

CONCLUSION

As shown in Chapter 4, preparation for childbearing is a key component of sanctioned reproduction in Africa. This chapter has examined the most prestigious form of contemporary preparation for adult life: formal education. We have seen that primary and secondary enrollment rates, especially those for women, rose rapidly in Africa during the 1970s and 1980s. Even widespread declines in public expenditures in the early 1980s have so far had little effect on the percentage of women aged 15-24 who attended primary or secondary school. Enrollment rates for women also rose more rapidly over the period than did those for men, so that the ratio of boys to girls enrolled in school came into better balance. How have these dramatic changes in education of women over the last 20 years affected adolescent fertility?

Before education became widely available to them, girls were trained for roles as wives and mothers. Today, many have ambitions outside the home in the formal labor market, and they often delay childbearing in order to acquire more education. Not surprisingly, the probability of giving birth as a teenager is slightly lower for women with primary education than for women with no education, and much lower for women with secondary or higher education.

In trying to explain these results, we have avoided the conventional assumption that educational achievement necessarily lowers fertility because we are dealing with adolescents, among whom this kind of causality may be reversed: Reproductive events may curtail opportunities for formal education. Certainly the fact that schoolgirl pregnancies are usually followed by dropping out indicates that the usual logic of temporal order may not apply. Without becoming embroiled in the intractable debate about the direction of the education-fertility relationship, we stress that social changes are shaping both education and adolescent fertility.

What we can say with some confidence is that education holds out rewards of social and economic advancement to girls who can delay childbearing to pursue their schooling. Equally powerful are the negative sanctions that discourage pregnancy. Although some observers have argued that formal education increases premarital fertility by eroding traditional checks on sexuality and by increasing promiscuity among unsupervised adolescents, such arguments seldom take into account the very real threats of expulsion from school that girls face if they become pregnant. Obviously, such strictures fail in many instances, as the proportion of schoolgirl pregnancies attests. Still, the overall effects of school policies that discourage reproduction are undoubtedly quite powerful.

One of the most important social changes that shapes the education-fertility relationship among adolescents is marriage. If overall fertility among

adolescents in Africa is changing less dramatically than premarital fertility (or, perhaps more accurately, the proportion of children without full paternal recognition), what role does education play in this trend? Both DHS data and ethnographic descriptions leave little doubt that marriage, like fertility, almost always terminates a woman's education. Indeed, although a number of girls withdraw early from school because of pregnancy, others withdraw because their families pull them out of school to give them to husbands. Conversely, a girl who delays marriage—or a sanctioned procreative relationship with a man—has a better chance than others do of going on in school. Yet for educated women, delaying marriage may also precipitate what we call premarital pregnancies simply because such women may prefer to label themselves as unmarried. Despite the stigma they suffer, this strategy may leave the door open wider to the possibility, however remote, of resuming schooling at a later date.

In the realms of both marriage and fertility, then, education appears to have the effect of elongating the period separating menarche from fertility and marriage—or what women are willing to call marriage—and of expanding the probability that a woman will have a premarital conception. Schooling may also make marital status itself even more ambiguous than it was before: Young women at certain junctures of the conjugal process who previously would have declared themselves to be married may now be quite ambivalent about proceeding with a certain conjugal relationship. Trying to keep their options open, they may be more likely to declare themselves as unmarried.

The assertion that many young women nowadays would like to delay fertility in order to pursue training that prepares them for adult responsibilities should arouse little argument. Yet Chapter 4 stresses that education is only one of many other avenues of preparation for adult life—and thus childbearing—in Africa. The notion that training, more broadly defined, may affect the onset of childbearing is relatively unexplored in the literature on fertility. To flesh out its dimensions, the next chapter turns from schooling to other forms of training.

6

Early Work, Training, and Preparation for Adulthood

Formal education is the most visible and prestigious form of preparation for adulthood in contemporary Africa, but in most countries only a minority of teenage girls attend secondary school. Schooling is only one of a wide array of training possibilities that also comprise farm work, trade apprenticeships, domestic service, and ritual initiation. This chapter casts a wider net. It asks what most young women are engaged in as they approach maturity, and whether some of these forms of early work experience and training interact with fertility in ways that parallel the effects of formal schooling. It develops the unconventional point that the last chapter raises: Besides formal education, other forms of preparation for adult life play important roles in delaying fertility.

Because we can find no direct evidence concerning the relationship of adolescent fertility to types of training other than formal education, we draw inferences by a combined analysis of two quite disparate kinds of data, national studies of economic patterns and microlevel qualitative studies. The analysis finds suggestions of a surprising coincidence in timing between the beginning of adult work and entry into childbearing. This finding points toward a broader understanding of how fertility intersects with preparation for work roles: The kinds of work opportunities that are available to women in the wider society determine specific kinds of training needs; these training needs in turn shape expectations of when parenthood should begin (see also Whiting and Whiting, 1991).

ADOLESCENT LABOR FORCE PARTICIPATION

By their midteens, most girls in Africa are hard at work. For them, the period between childhood and adulthood is exceedingly short. According to International Labour Office (ILO) figures in Table 6-1, which shows the activity rates for boys and girls aged 10-14 and 15-19 for the four regions of Africa, youth of both sexes begin their work lives at a relatively early age. Young people in eastern Africa are most likely to be working; those in southern Africa are least likely. For all regions and in both age groups, the activity rate appears to be higher for boys than for girls, but the labor of girls is very likely underreported: Much of the domestic and farm work that women, and especially girls, perform is seen as something other than work. Even discounting these biases, the figures show that both sexes begin work at young ages in many countries. About 40 percent of boys aged 10-14 are working; as we saw earlier, about 60 percent are in school. (Some adolescents will be economically active and still attending school.) Among young men aged 15-19, 70 percent are in the labor force. By 20, the vast majority of men are in the labor force, and most women are in the labor force, or raising at least one child, or both. Within these generalizations, however, lies vast diversity.

What Do Adolescents Do?

For most older girls, training for adult roles blends indistinguishably with labor in the house, on the farm, or in the market. Some brief descriptions of the roles adolescents play in different sectors of the contemporary economy will provide a qualitative sense of their working conditions and begin to identify possible mutual influences between work and childbearing. School-going adolescents often participate in the roles described here; but often these roles are undertaken as full-time work/training.

TABLE 6-1 Percentage of Population Economically Active in African Regions, by Age and Sex, 1980

Region	Age Group 10-14			Age Group 15-19		
	Male	Female	Total	Male	Female	Total
Eastern Africa	46	37	41	75	62	68
Middle Africa	38	25	31	65	39	52
Western Africa	41	22	31	70	45	57
Southern Africa	4	2	3	39	29	34

SOURCE: International Labour Office (1986, 1990).

Farming

The most thoroughly described roles of children in Africa are those of helpers in farm economies. Yet even in agricultural contexts, the link between work and the onset of fertility has drawn little attention. Recent work by Reynolds (1991) and Cheater (1984) illuminates some of these family dynamics for different areas of Zimbabwe.

Reynolds' study of a Tonga community pays close attention to the work of children. Several children in her sample have fields of their own, actually pieces of a parent's plot, but contribute the grain to their mothers' brewing stock (Reynolds, 1991:30). On their parents' farms, "[c]hildren's labour is brought in at peak labour periods. Some children work for some period of each working day on the fields. Most girls contribute to, or carry much of, the domestic labour load and child care during busy farming months." During the planting and weeding season, young people between 10 and 20 do about 18 percent of all the work, about the same amount as adult men (Reynolds, 1991:46-49), plus considerable child care duties to release their mothers for work in the field. Children under 10 are also child-minders. "In this labour economy, children are an adjustable input, with girls more adjustable than boys" (Reynolds, 1991:89).

A girl's work for her mother allows sexual surveillance but does not delay marriage. Like many other matrilineal groups, the Tonga have limited polygyny and small age gaps at marriage between spouses. Though child betrothal was once common, couples often elope now (Reynolds, 1991). The parents usually acquiesce to elopement upon the payment of fines and bridewealth installments. Most of this wealth goes to the father, although he is not the primary beneficiary of the girl's labor. Because the mother has no formal sanctions to control the entry and exit of her daughters from her authority during their work lives, the high value of a daughter's work does not constitute an obstacle to her early marriage.

Cheater studied Shona (patrilineal) commercial farming households in a freehold purchase area. There she writes, "[y]oung women (whether junior wives, daughters or daughters-in-law) together with adolescent children of both sexes, comprise the core of most family working units" (Cheater, 1984:59), supplemented by extensive use of hired labor. Here the principal farmer is male; he draws on his wives and daughters for farm labor and to take part in cooperative work groups in rotating labor agreements with his neighbors. Marriage, however, offers a male farmer greater and more permanent control over a female labor force than retaining his daughters at home. As long as he can replace a daughter's contributions by marrying additional wives himself, he has nothing to gain by according her an extra two or three years of premarital life. In societies with this kind of agricultural division of labor, polygyny offers greater and more permanent control over a female

labor force than does trying to retain highly productive daughters at home. As long as polygyny persists there will be downward pressure on the age at marriage.

Wage Labor

Adolescent employment outside of a kinship context is far from new. From the beginning of the colonial period, we have evidence of a voracious demand for labor. Young men and a surprising number of young women took intermittent work for wages. In Nigeria, in the early years of this century, Lord Lugard was desperate for carriers to bring in raw materials for construction and development (roads, bridges, administrative buildings; see Swindell, no date). In the Gold Coast, now Ghana, the transportation of the cocoa crop demanded vast numbers of porters to carry the crops to market and laborers to clear the land and tend the crop. Children were not strong enough or skilled enough for heavy labor in mining and public works construction, but an author in the Gold Coast Annual Report of the Medical Department of 1920 recounted being "forcibly struck with the number of young adults, principally girls, who were carrying loads of cocoa . . ." (quoted in van Heer, 1982:500). In the 1930s, young men from the Northern Territories were recruited to work in the South at ages 14 or 15 (van Heer, 1982). Girls' labor was part of sharecropping agreements, and when large-scale rice cultivation developed in the 1950s, girls were employed for seasonal work as porters and in processing (van Heer, 1982).

The employment of adolescents in more formal contractual situations was subjected to guidelines beginning in 1921. In that year the League of Nations convention set the minimum age for agricultural work at 14, and even then made such work permissible only outside school hours. No consistent mechanisms for enforcement existed, especially in areas of the world in which reliable verification of age was impossible. Where economic sectors competed for a limited labor force, pressures were brought to bear on all the aspects of work: the age guidelines, and the simple advisability and efficiency of youth carrying out heavy work. In South Africa in the 1920s, mining was expanding fast enough to draw off most of the able-bodied men over 18. An expanding agriculture therefore drew on the youth. Young men in their early and midteens who were too young to work in the mines became sugarcane cutters, one of the most physically demanding of all jobs, with some disastrous health implications (Beinart, 1991). Records of official investigations demonstrate that the use of youth labor in wage employment in the formal sector was quite widespread.

In northern Rhodesia, "children were present in towns from the earliest colonial years and . . . many young boys worked, especially in private households, with or without pay"; "juveniles [those under 18] were em-

ployed as domestic servants in larger numbers than adult women from 1963 through 1966" (Hansen, 1990:226, 227).

Several generations of men and women in different parts of Africa have worked for wages as teenagers and still do, as Guyer found in her studies of both large- and small-scale farming in western Nigeria (1991). Youth labor is in great demand because of its relative cheapness (see van Heer, 1982), low status, transience, and suitability to specific tasks such as light weeding, harvesting, surveillance, and customer recruitment in transport and small business. One might go so far as to argue that the proletariat in Africa in both urban and rural settings has been predominantly youthful, outside those contexts in which trade unions and state regulations have effectively restricted youth employment.

The absence of visible enforcement of many age laws cannot be attributed simply to bureaucratic shortcomings. Children themselves often take economic action independently and resist adult constraints on their activities. Children in northern Ghana were relatively free at young ages to engage in agricultural wage labor and did not necessarily hand over their wages to their parents (Van Heer, 1982). "Boys [in South Africa] ran away from herding cattle . . . without the permission of their parents . . ." (Beinart, 1991:56). And many street children in Lomé who make their living from begging, stealing, and general hustling come from established families (Marguerat, 1990); many in some sense abandoned their families because of quarrels, rather than being abandoned by them. In Capetown, researchers have identified three different categories of working children: members of street gangs involved in illegal work, underage children working for their families, and "strollers," "children who have run away from home and school," explicitly to achieve "perceived freedom from overt control" in tyrannical sometimes disorganized, and usually impoverished families (Scharf et al., 1990:262, 272).

Trade Apprenticeships

Especially in economies with flourishing small or informal-sector businesses, apprenticeship is a lively sphere of constant innovation, keeping pace with a rapidly changing economy and preparing young people to participate in new fields of endeavor (King, 1977; Goody, 1989). To make a living in this highly competitive environment, young people venturing into new trades must learn technical skills as well as accounting skills in setting prices, assessing costs, and calculating profits. They also need less obvious but equally essential skills in cultivating working ties with laborers, suppliers, clients, loan agents, government trade regulators, and revenue agents. According to ethnographic studies in West Africa (see, for example, d'Azevedo, 1973; Dillely, 1989), young people are even said to need skills in dealing

with spirits that can either sabotage a business or ensure its success. Besides learning such skills, apprentices need to acquire capital: commerce and storage space, start-up tools, materials, and so on. Some accumulate capital over the long span of their apprenticeships, doing small jobs on the side for clients, sometimes unbeknownst to the master; others hope to acquire capital from their masters or families at the end of their training.

King (1977, 1979, 1987, 1989, 1989-1990) has written extensively about the emergence of new skill systems and in particular the expansion of small or informal-sector businesses in Africa that use low-cost, equipment amid a scarcity of capital goods. According to King (1987:18), the philosophy of these businesses

... is based upon a whole series of improvisations which compensate for not having the right tool, material or spare part. This can obviously mean utilizing second best solutions with second-hand materials, but the intention is to repair, and to 'make do' at minimum cost to the client.

In such an economy, the range of endeavors a young person can pursue is extraordinarily diverse. Most common, especially in western Africa and especially for boys, are opportunities to learn a trade through apprenticeship. These practices were widespread even in the past. Among the Gola of Liberia, in the sphere of indigenous arts and crafts alone, were singing, dancing, musicianship, storytelling, oratory, legerdemain, acrobatics, blacksmithing, woodcarving, and weaving (d'Azevedo, 1973). Nigerian youths could take up blacksmithing, bronze casting, pottery making, wood carving, carpentry, leatherworking, goldsmithing, and weaving (Callaway, 1964).

The scope of modern professional apprenticeships is much larger still. For Kenya, to list but a few, there are spray painting, blacksmithing, welding, shoemaking, tailoring, carpentry, driving, and TV repair; also the manufacture of tin lamps, bicycle carriers, charcoal braziers, water cans, kitchen utensils, measuring containers, auto spare parts, and rat traps (King, 1977). Even in the small towns of Nigeria, young men undertake apprenticeships in almost every conceivable occupation: battery charging, motorcycle repair, fan repair, electrical installations, medicine selling and tractor driving, as well as the better-known tailoring and blacksmithing.

These apprenticeships require months or years of training. Learning "native medicine" in Nigeria might take 10 years (Callaway, 1964). Especially in light of the paucity of slots available in secondary education in many countries and, moreover, the competition to remain on the formal education track, trade apprenticeships offer an important way of training young people for a vast, ever-expanding range of occupations:

Speaking of his apprentices, a Senegalese master craftsmen observed, "I have boys who were thrown out of school" [Morice, 1982:516].

Just as there are many different kinds of apprenticeships, there are many ways of undertaking an apprenticeship: from informally observing a parent plying a trade to highly contractual arrangements with a trade master or the manager of a modern business. Some apprentices live with the master, performing both professional and domestic labor, but others live nearby with parents or other relatives. Modes of recompense vary enormously as well. When the apprentice is a close relative fees might be waived. But in general, the less money paid in fees, the longer the apprenticeship and the more domestic labor expected. During the course of any one apprenticeship, the terms of the arrangement may change. An apprentice may progress from an unpaid resident learner to an independent paid employee or even, eventually, a business partner (Callaway, 1964).

The Urban Informal Sector and Self-Employment

Concerns about youth employment in urban areas have been expressed since at least the 1960s (see, for example, Callaway, 1964). But actual studies of self-employed urban youth are sparse. The self-help urban occupations of adolescents in what is known more broadly as the quasi-legal "informal sector" may engage more youth than any other type of work. Young people can be found in cities offering to carry shopping bags, guard cars, wash windshields, load lorries, recruit taxi passengers, lead livestock from market to slaughterhouse, sit precariously atop truckloads of produce during bumpy journeys, and sell almost anything: bread, mothballs, magazines, pills, dishcloths, and coat-hangers. Van Onselen's pioneering studies of South African gang life provide one historical source (1982). Marguerat's work on Lomé represents a new genre of studies that describes how foraging in the urban milieu adds up to a living and a way of life (1990; see also Burman and Naude, 1991, and Reynolds, 1991, on children in South Africa).

Schildkrout's studies in Kano, Nigeria, of children's work, particularly that of girls who participate in trading, provide insight into an established urban tradition, to be discussed later (see, for example, 1979, 1981, 1986). On the whole, however, the literature is thinner on girls than on boys (see also Sanjek and Sanjek, 1976, on Accra, Ghana). The activities of adolescent girls in urban areas probably still fall into the same categories of closely supervised training and house work as in the past. The press has suggested that youthful prostitution has begun to expand in certain urban areas in the current recession. Several exposés on Nigerian prostitution reveal that women tend to start around 18 (*African Concord*, June 3, 1991). A recent newspaper article on Nairobi suggests even lower ages (*New York Times*, January 2, 1991), though we have little systematic data to assess these impressions.

Finally, the news media carry many references to young male teenagers in various armies in Sudan, Liberia, Mozambique, Somalia, and Angola in what is best seen as the informal military sector. For instance, a newspaper story entitled "Is Food Going to Orphans or Future Sudan Rebels?" describes how 12,000 "young boys" from Sudan, who were largely under the age of 15, were "recruited by separatist guerrillas and taken to Ethiopia as part of a scheme to give themselves a manpower pool of the future" (*New York Times*, August 13, 1991).

As urbanization increases, the opportunities for youth to make a living in cities will inevitably increase, whether within the law or outside it. How these opportunities intersect with life cycles of fertility, family, and employment is almost totally unexplored.

PATTERNS OF FEMALE EMPLOYMENT

Men's employment bears relevance for fertility through the influence of work and income on the ability to acquire partners. But the clearest mutual implications between work and fertility are for women. By 20, girls in most African societies have already begun their work careers or childbearing—or both. How these two careers intersect with one another, both within adolescence and over the longer life cycle, determines how soon, and at what pace, full adult responsibilities must begin. The timing of these events varies according to women's occupational opportunities, which in turn grow out of the economy itself. This section brings together several types of data to examine women's range of life-long opportunities for work within the division of labor. It begins with very general economic categories, identifying the kinds of work for women that each economy creates.

Table 6-2 groups countries into four very broad economic types using ILO data for 1980 (the latest available): agriculture, mixed trading, industrial influence, and Sahelian pastoralism. The following patterns emerge:

A. Agricultural economies: For the 24 countries listed in this category, an average of 90 percent of the female labor force is employed in agriculture. In these same countries, 35 percent of girls aged 10-14 are in the labor force. This early start to work life tends to be associated with a peak in labor force participation in midlife.

B. Mixed trading economies: As in Group A, women in these economies are highly active in the labor force, but in trade and processing as well as in agriculture. Only 69 percent of employed women are in agriculture, and only 23 percent begin work life before the age of 15. This later start of work is associated with a peak at a later age.

C. Industrially influenced economies: In southern Africa, the proportion of women in the labor force who are engaged in agriculture is still

TABLE 6-2 Participation of Women in Labor Force, by Type of Economy, African Countries, 1980: Percentage Except as Noted

Country	Girls 10-14 in Labor Force (1)	Women in the Labor Force Who Are in Agriculture (2)	Girls 10-14 in the Labor Force Who Are in Agriculture (3)=(1)×(2)	Peak Labor Force Participation (years) (4)
A: Agricultural Economies (high FLFP, midlife peak)				
Angola	29	89	26	40-44
Burkina Faso	46	86	40	35-39
Burundi	47	98	46	35-39
Congo	21	87	18	55-59
Ethiopia	33	85	28	30-34
Equatorial Guinea	29	86	25	40-44
Gabon	19	88	17	40-44
The Gambia	35	93	33	40-44
Guinea	34	88	30	40-44
Guinea Bissau	34	92	31	40-44
Kenya	35	86	30	40-44
Liberia	19	87	17	40-44
Malawi	38	94	36	45-49
Madagascar	33	94	31	40-44
Mozambique	50	97	49	45-49
Niger	47	94	44	35-39
Rwanda	47	98	46	35-39
Senegal	43	90	39	40-44
Sierra Leone	18	82	15	40-44
Somalia	31	90	28	40-44
Tanzania	42	92	39	40-44
Uganda	38	89	34	40-44
Zaire	24	95	23	40-44
Zambia	20	84	17	55-59
Mean (N = 24)	35	90	31	—
Pattern	—	—	—	Midlife
B: Mixed Trading Economies (high FLFP, late peak)				
Benin	28	75	21	30-34
Cameroon	24	78	19	45-49
Côte d'Ivoire	26	75	20	40-44
Ghana	6	52	3	50-54
Nigeria	19	69	13	50-54
Togo	34	67	23	40-44
Mean (N = 6)	23	69	17	—
Pattern	—	—	—	Older

TABLE 6-2 continued

Country	Girls 10-14 in Labor Force (1)	Women in the Labor Force Who Are in Agriculture (2)	Girls 10-14 in the Labor Force Who Are in Agriculture (3)=(1)×(2)	Peak Labor Force Participation (years) (4)
C: Industrial Influence Economies (low FLFP, early peak)				
Botswana	7	86	6	20-24
Lesotho	12	90	11	45-49
Namibia	10	51	5	20-24
South Africa	0	13	—	20-24
Swaziland	30	83	25	40-44
Zimbabwe	31	82	25	40-44
Mean (N = 6)	15	68	12	—
Pattern	—	—	—	Young
D: Sahelian Pastoral Economies (very low FLFP, no peak)				
Chad	11	87	10	—
Mali	14	78	11	—
Mauritania	12	87	10	—
Mean (N = 3)	12	84	10	—
Pattern	—	—	—	None

NOTE: FLFP = female labor force participation.

SOURCE: International Labour Office (1986, 1990).

fairly high, especially if South Africa itself is removed, but work life starts relatively late and peaks early.

D. Sahelian pastoral economies: In these countries, pastoralism is the mainstay of the economy, and Islamic sexual and marital codes often apply. Very few women are recorded as being in the labor force, as we will show presently. Those few who are recorded tend to appear as working in agriculture; they begin work early and have a steady participation rate until age 59.

Taking the top 10 countries in proportions of girls aged 10-14 who are working (column 1), and the proportions of working women who are in agriculture (column 2), we find 7 countries on both lists. Agricultural economies seem to put women to work at early ages. Women in mixed trading, industrially influenced, and Sahelian pastoral economies, on the other hand, either have more varied work prospects or fewer at all; these configurations appear to entail a later entry into work.

TABLE 6-3 Labor Force Participation Rate of Girls Aged 10-14, 1950 and 1980

Country	1950	1980	Change (percentage points)
A: Agricultural Economies			
Kenya	38	35	-3
Madagascar	37	33	-4
Rwanda	50	47	-3
Senegal	45	42	-3
Uganda	41	38	-3
B: Mixed Trading Economies			
Côte d'Ivoire	46	26	-20
Ghana	18	6	-12
Nigeria	21	19	-2
C: Industrial Influence Economic			
Botswana	21	7	-14
Lesotho	19	12	-7
South Africa ^a	3	0	-3
Swaziland	39	30	-9
Zimbabwe	36	31	-5
D: Sahelian Pastoral Economies			
Chad	19	16	-3
Mali	12	11	-1
Mauritania	17	14	-3

^aThe base year is 1960.

SOURCE: International Labour Office (1986, 1990).

With the exceptions of Côte d'Ivoire, Botswana, and Ghana, these general national characteristics of labor force participation among young female adolescents have changed little over the past 30 years. Table 6-3 suggests that these cross-sectional data do not represent merely a passing moment in a rapidly unfolding scenario. Despite recent changes in female labor force participation our categorization of countries appears to reflect persistent economic patterns that, despite surface changes, people can count on if they plan over the life cycle.

ILO data can also be used for the next step in the analysis: examining the association between the various types of economies and the timing of entry into childbearing, which we measure with Demographic and Health Survey (DHS) data.¹ One example from each type of economy is used to

¹The age points for fertility and marriage in Figures 6-1 and 6-2 were derived from the published DHS country reports. Because the reports display birth and marriage figures for women who are currently in the relevant age groups and thus have not yet completed their

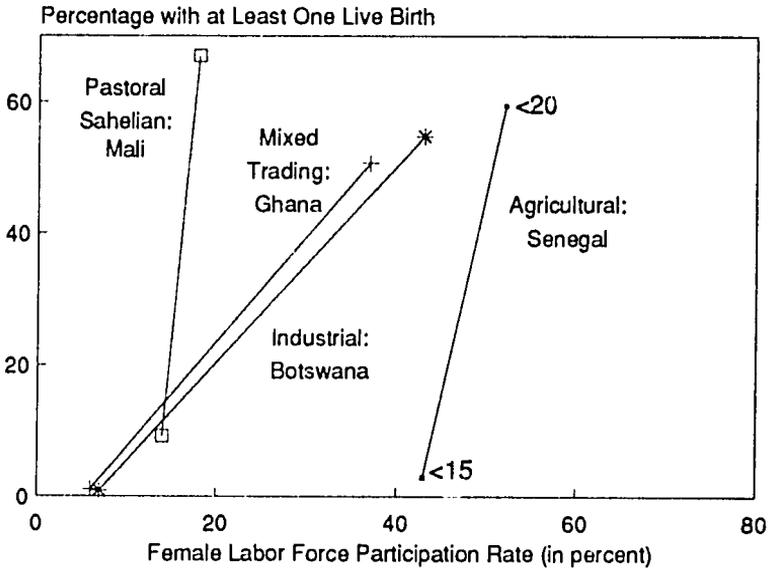


FIGURE 6-1 Pathways of entry into work and childbearing of women up to age 15 and up to age 20, four types of African economy.

highlight the different pathways through adolescence: Senegal is used to represent agricultural economies; Ghana, mixed trading economies; Botswana, industrially influenced economies; and Mali, pastoral economies. Figure 6-1, which focuses on women under age 20, examines the timing of childbearing and work and the relationship between these two events. Obviously, we must keep in mind that this figure shows only macrolevel patterns and that, within any category, countries vary from one to another, so that the patterns described below do not capture fully the experience of each type of economy listed in Table 6-2. Nonetheless, the different patterns of work and childbearing that emerge are provocative. They suggest that broad economic forces may be quite influential in determining the onset of work and childbearing.

In Figure 6-1 the first point on each pathway illustrates two things: the percentage of women who have given birth by age 15 and the percentage of women who have entered the labor force by age 15. The second point

experience, we used the figures for the next oldest age cohorts to derive the relevant numbers. For example, the percentage of women who have given birth before they were 20 years old is obtained from women aged 20-24, because they are the most recent cohort to have lived through their teenage years.

reflects the same percentages for women by age 20. The resulting lines represent the proportions of young women in the population who have experienced these two events—entry into work and childbearing—during the teen years and the pace with which these two events occur. Although we can report the percentages of women having a first birth before age 18, we cannot place these points on the graph because we lack the corresponding female labor force participation rates.

In Senegal, the requirements of agriculture induce women to take on adult work responsibilities at a younger age and in a more intensive spurt than is true in most of the other economies, and childbearing is slower to start. Among women aged 10-14, 43 percent are already in the labor force; only 3 percent have given birth. There is little increase in labor force participation by age 20, but there is considerable initiation of childbearing. The work/fertility pathways for Kenya and Uganda (not shown) look very similar to that of Senegal; but for Burundi, the other agricultural economy listed in Table 6-2 for which data are available, the pathway is flatter because women begin childbearing even later than those in Senegal, Kenya, and Uganda.

In Mali, reported labor force participation is very low, and childbearing begins very early and rises extremely quickly (9 percent of women giving birth before age 15 and 47 percent before 18). This pattern suggests that reproduction is a woman's main responsibility throughout adolescence in a pastoral economy. However, these statistics may significantly underreport women's labor contributions in a pastoral economy.

Labor force participation rates in Senegal and Mali appear quite different at first glance: Senegal's predominantly agricultural base makes heavy demands on female labor throughout adolescence, whereas Mali's predominantly pastoral base places a much larger emphasis on early childbearing. But despite their differences, both countries have work patterns that begin quite early and at levels that are not far below their eventual peaks (see also Figure 6-2). For age at first birth, young women in Mali begin childbearing earlier, on average, than do those in Senegal. But once childbearing begins, the percentages of women having at least one live birth rise very quickly and at virtually identical rates in both countries. Almost half of the women who will ever bear children have had their first child before they reach 18.

Ghana and Botswana manifest a very different pattern: work and childbearing are delayed. In Botswana, an industrially influenced economy where training for girls consists almost exclusively of formal schooling, very high school enrollments—and concomitant low work rates—coincide with very low adolescent fertility rates, especially in the early teen years: Only 1 percent of women give birth before age 15. Even by age 18, only 26 percent of all women have given birth; by age 20, 55 percent have done so. In Zimbabwe, the other industrially influenced economy with DHS data,

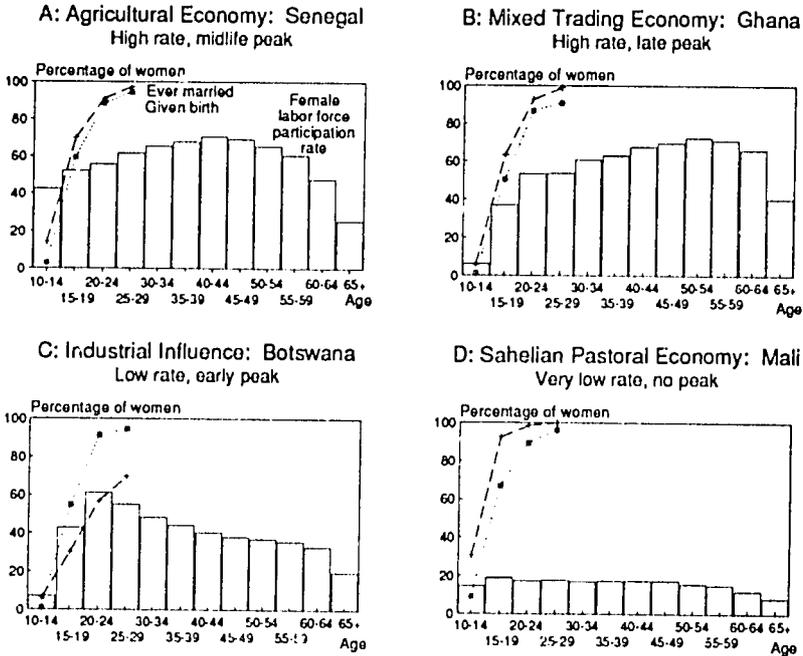


FIGURE 6-2 Life-cycle pathways of work, marriage, and childbearing for women in four types of African economy, by age. SOURCES: Ndiaye et al. (1988); Ghanaian Statistical Service and Institute for Resource Development (1989); International Labour Office (1986); Lesetedi et al. (1989); Traoré et al. (1989).

women under 20 have higher rates of labor force participation than do their counterparts in Botswana. Thus, a line for Zimbabwe would begin and end to the right of one for Botswana. However, because Zimbabwe has moved rapidly toward universal primary school enrollment since 1980, the pathway probably has now shifted closer to that for Botswana.

Ghana, a mixed trading economy, has fewer young women enrolled in secondary school than does Botswana. The major surprise, then, is that Botswana and Ghana have virtually identical patterns of work and fertility. The probable explanation is that in Ghana trade apprenticeships substitute for formal education. Ghanaian women enjoy a wide range of professional prospects, whether in the formal or the informal sector, for which they must acquire training. In Ghana, only 6 percent of women aged 10-14 are in the labor force, and, as in Botswana, only 1 percent have had a birth. By age 18, still only 23 percent of young Ghanaian women have given birth, and 51 percent by age 20; these figures are quite comparable to those in Botswana, but well below the levels reached by age 20 in Senegal or Mali.

To reiterate, we must be careful in interpreting this figure because it represents relations at a macro rather than a micro level. However, if we consider Ghana and Botswana, the two countries with abundant female training opportunities (schooling or other forms of training), we see that between ages 15-20, the slopes of the respective pathways are approximately equal to one, suggesting that the beginning of childbearing is closely related to the beginning of work, whether this occurs early or late in adolescence. This pattern may simply reflect the fact that women in Ghana and Botswana begin work or childbearing in roughly equal proportions after stopping schooling or training. It may also suggest, though, that women in these two countries begin work and childbearing simultaneously during their teenage years. Given what we know about the general incompatibility of training and fertility in both countries, women who engage in long periods of training also very likely begin childbearing later than women who do not. (As we posited above, however, it is also possible that pregnancy interrupts schooling or training.)

By contrast, in Senegal, women's entry into work does not appear to be associated with entry into childbearing, at least initially. In agricultural economies, female labor is required at young ages on family farms so that work begins earlier than childbearing, although the percentage of women beginning childbearing quickly picks up, presumably because marriage follows soon after puberty. Mali displays yet a different pattern. Childbearing and whatever activities are reported as work begin about the same time, presumably shortly after married life begins. However, less than a quarter of all women work during adolescence, so the pathway for Mali starts far to the left of the starting point for Senegal, and the percentage of teens having a first birth quickly outpaces that of teens in the workforce.

Figure 6-2 takes us two steps further. It situates the adolescent years in the broader context of the female life cycle, and it adds marriage to the picture of work and fertility. The figure displays as a series of bars the female labor participation rate of women by age for the late 1980s. Superimposed on these bars are lines representing the percentage of women who report marrying and giving birth by each age. The relative timing of first birth and first union merit attention, especially in the case of Botswana, but the major points of interest in this graph are the various patterns of work over women's life cycles and how these work patterns coincide with the maturation of the younger generation.

The results depict female life cycles in the four countries discussed above. In Senegal, female work is already well under way by age 10-14, before childbearing begins. Marriage also begins fairly early, perhaps to solidify claims to a husband's land. Work continues at high levels throughout the reproductive cycle and peaks at 40-44, coinciding with the last stage of childbearing. After age 45, about the time that a woman's workload

might be eased by the acquisition of a first daughter-in-law, labor force participation begins to decline, but it does not begin a sharp descent until age 60, when the last of a woman's children are reaching marriageable ages.

In Ghana, the mixed trading economy, work and childbearing begin late, about the time that marriage begins. The pattern of work activity is also quite different from that in an agricultural economy: the peak of work activity occurs at 50-54, 10 years later than in an agricultural economy and well past the end of childbearing. This late peak may reflect the fact that, unlike in an agricultural economy, women's work is progressively less arduous as women assume supervisory roles, either by retaining their own daughters into late adolescence or acquiring other girls as workers and trainees.

In Botswana, where a very high proportion of adolescent births are premarital (a fact we discuss in more detail below), the pattern of work before age 25 is similar to that of Ghana, with substantial work beginning during a woman's late teens. However, the similarity of Botswana and Ghana ends after age 25 because reported labor force participation in Botswana peaks quite early, at 20-24, during the early stages of childbearing, and then declines slowly through middle and old age.

Finally, in Mali, the labor force participation of women is uniformly low over the life cycle, whereas marriage and childbearing begin very early.

DISCUSSION

These patterns of work, fertility, and marriage in the various types of African economies raise two related questions: Where women begin work and childbearing at an early age, what mechanisms within a woman's life cycle determine how early in her adolescence she takes on adult responsibilities? Do some of the determinants or reinforcements for an individual woman's pattern lie not only in her own projected opportunities but in her relationship with the older generation at different stages of career growth?

In agricultural economies a young woman starts out early as a helper to her mother, marries quickly to gain productive rights to her own plot, and begins childbearing as she steps up her contributions to a slowly retiring older generation of in-laws. In fact, by the time many women in agricultural economies reach adolescence, their mothers and, above all, their mothers-in-law (with whom they very likely reside) are beginning the slow decline in labor force participation. It may be that principally *because* she acquires a daughter-in-law, an older woman can decrease her own taxing farm duties.

Classically, in systems in which women do much of the farming, the division of labor and the skills required are not diverse enough to support apprenticeships and other training in alternative work, so institutions that

provide niches for adolescent activities other than agriculture barely exist. By contrast, in Ghana, a mixed trading economy, young women seem to be preparing for the "long haul" of life. Adolescence is a more prolonged period, in which women build up expertise through formal education and apprenticeships. They are expected to become increasingly self-reliant as they grow older, to be able eventually to fill the same support role for their own dependents as their elders did for them. Those dependents, in turn, must learn both technical and social skills that are considered too difficult to learn in childhood and too specialized to be available within the narrow confines of most natal families. In the process of imparting the skills of their trade, the older women will put other, younger women to work. Because older women are taking on younger women as apprentices or helpers, they can expand their economic activities for 10 years or so past the age of childbearing. For adolescent women, then, marriage and childbearing are postponed until the older generation has conveyed specialist skills to them that are suited to a diversified economy and, in doing so, has made maximum use of youthful labor for its own economic purposes.

In Botswana, an industrially influenced economy, the attempt to establish some tie with a male labor migrant is almost certainly one of the early efforts a young woman makes as she begins her childbearing career. This strategy is adapted to a situation in which men have considerably more employment options than women. Older women appear to face an even bleaker labor market than do their daughters and daughters-in-law. As their own labor force participation declines, the only major role that remains open to them appears to be childcare for their daughters who enter the labor market about the time that they begin an early motherhood outside of marriage. (Ethnographic evidence from as early as the 1930s supports this interpretation; see, for example, Schapera, 1933.)

Finally, in Mali, a country in the pastoral Sahel, few women actively participate in the work force. Because families have little to gain by keeping their daughters home during an idle adolescence, and much to gain from forging alliances with other families through marriage and the arrival of grandchildren, young women begin their marital and childbearing careers quite early.

The rest of this chapter pursues the idea that the different economic patterns we have found in the macro data produce different emphases on adolescent education and training. The resulting patterns are played out in each generation through personal life cycles and intergenerational relations.

FERTILITY AND TRAINING OUTSIDE SCHOOLING

Schooling is only one of many training possibilities, and other forms of adolescent training and work experience that abound in a highly diverse

labor market may have effects on delaying marriage and parenthood that broadly resemble those of education. Unlike schooling, however, with its official enrollment statistics, the young people engaged in training opportunities in the informal sector are extremely difficult to enumerate. Training opportunities in business and manufacturing, and even in skills such as nursing or secretarial work, can spring up in a variety of contexts, ranging from trade schools to small shops and even private homes. Because the major demographic surveys lack questions that would allow us to examine the association between fertility and training, broadly defined, for women, we rely on logical inference from the limited ethnographic evidence that can be gleaned. The following analysis takes the broad interpretations suggested by the national statistical studies and explores them more fully through recourse to local studies. It identifies patterns through the use of both common cases and apparent exceptions.

The two most important economic patterns for women in sub-Saharan Africa are those dominated by subsistence farming and those with highly diversified specialty occupations. In most African agrarian communities, young women need comparatively little specialized knowledge to begin productive activities. This fact, coupled with a high demand for their labor and reproductive capacities, is consistent with early marriage and the assumption of farming activities. Quite different from agricultural economies are those with highly differentiated tasks that require long periods of training. We describe first two especially visible examples of training activities in such economies: women's trade apprenticeships and home training. We then turn to several important variations that demonstrate the links between economy and training requirements.

Women's Trade Apprenticeships

Although boys clearly have more apprenticeship opportunities than girls do, across the continent young women with little or no schooling can enroll in professional schools for training in pursuits like nursing and secretarial and beautician work. Girls can take up less formal pursuits, such as domestic training, and instruction in indigenous skills such as herbalism or midwifery. And in Kenya, girls participate in the service sector as bar girls, servants, or prostitutes; or in occasional employment such as coffee- or tea-picking (King, 1977). But especially in coastal West Africa, many families pay for adolescent daughters' training in enterprises that can provide reliable income. Many girls engage in trade apprenticeships such as spinning, weaving, cloth dyeing, dressmaking, food processing, and trading (see, for example, Callaway, 1964; Robertson, 1984; White, 1987; Aronson, 1989). In western Nigeria new skills learned in girls' domestic science classes in school, such as dressmaking, catering, and baking wedding cakes, were quickly transferred to the market through apprenticeships (Denzer, 1992).

Apprenticeship does not necessarily teach literacy or bring about greater exposure to Western ideas or even to urban life. Nevertheless, it is clearly in the learners' best interests to delay marriage and childbearing while they are in training. The longest periods of training for women are very likely associated with longer delays of marriage and childbearing, though there are virtually no available data, either quantitative or anecdotal, to address this hypothesis.

Another important correlate of sexual activity and fertility is likely to be whether the apprentice lives with the trade mistress. The young Ghanaian women whose sexual activities are most likely to be monitored are those who live in the households of their trade mistresses, instead of living nearby (Gracia Clark, personal communication). To some extent, whether training takes place on a live-in basis depends on the nature of the occupation. Bakers' apprentices often live in because they must work late at night or very early in the morning. Beautician apprentices, on the other hand, are much less likely to live in because their trade is plied only in the daytime. Living arrangements for apprentices in trading also cover a wide range. Another criterion of the degree of monitoring, according to Clark, is degree of dependence on one's mistress. If an apprentice does not depend on the mistress for subsistence but earns a wage or lives on her own profits, then her sexual life is more likely to be viewed as her own business; pregnancy, when it happens, is a relatively casual transition. Only in cases in which pregnancy would clearly pose a problem, such as in curtailing the travel necessary for conducting a trading business, would such an apprentice be dismissed.

Fostering and Home Training

The fosterage/housemaid practices (often called "home training" or "domestic training") that are common particularly in West Africa seem quite different from formal education or apprenticeships. Girls account for the overwhelming majority of home training children. They work very long hours, under close surveillance and strict discipline. They perform much of the labor in urban households: sweeping, cutting firewood, hauling water, preparing food, washing clothes, and caring for guardians' young children (for parallel descriptions, see Blanc and Lloyd, 1990). In Sierra Leone, a cultural metaphor, "gekko," compares such girls to the lizards that inhabit rural houses, clinging silently to the walls (Bledsoe, unpublished field notes).

Though cast as a learning activity, home training is often a thin disguise for unpaid domestic drudgery in the service of adult women who are otherwise occupied in the economy. Indeed, families nowadays are leery of sending boys to people who merely keep them for domestic training and do not teach them a trade or Arabic or send them to school. But despite the

obvious potentials for exploitation, girls from poor rural families are usually happy to forsake the life of a "country" girl to go to an urban area to learn prestigious "civilized" styles of homemaking (see also Goody, 1989; Moran, 1992). In Sierra Leone girls sent to urban households for domestic training learn to cook in modern aluminum pots, rather than heavy earthenware or cast-iron pots; to use prepared ingredients such as bouillon cubes and canned tomato paste, instead of preparing food from raw ingredients; to clean modern padded furniture, instead of wooden stools and straw mattresses; and to create individual places at a table with forks and spoons, rather than serving a large communal basin on the floor, out of which everyone eats with their hands. Such girls, even if they cannot attend school, may also learn the national lingua franca, making them doubly attractive as prospective wives and hostesses for educated, "civilized" suitors (Bledsoe, unpublished field notes).

Guardians feel considerable pressure to keep their home training girls from trafficking with men; they are expected to keep these girls under close surveillance as well as to discipline them severely for unexplained absences. Yet there are inevitable slippages. When they occur guardians are blamed, implicitly, for laxness in discipline. People often comment, on the other hand, that girls are especially vulnerable to male sexual advances and offers of monetary help when they are being punished by food deprivation for a leged carelessness or laziness.

Like other forms of training, home training may delay marriage and childbearing. Conversely, as we saw in the case of formal schooling, girls who avoid pregnancy may get more home training experience. Girls in domestic training in Ghana who become pregnant are almost always evicted, unless they are close relatives (Gracia Clark, personal communication). Because guardians are anxious to reap the benefits of a girl's labor as she grows stronger and gains more skills, early pregnancy, logic suggests, goes against almost everyone's interests. The guardian cannot possibly obtain the services she needs from an adolescent mother, and the young woman's training is usually terminated.

Variations on the Theme of Training and Fertility

To flesh out the thesis that length of training, broadly defined, is related to the timing of entry into marriage and childbearing, we explore several variations in the major economic types we have identified, to see whether they are associated with predictable demographic variations.

Secluded Female Industry

If the need to train women for skills in a diverse economy is, in fact, linked to late entry into childbearing and marriage, then any major devia-

tion from this pattern demands close scrutiny. There is, indeed, one such case, that of the Hausa people in northern Nigeria, which has special significance for the study of African adolescent fertility. The apparent contradiction to be explained is that despite a pressing need for training in a vibrantly diverse commercial economy with numerous work opportunities for women, girls begin marriage and childbearing extremely young. Indeed, they marry at ages that are almost the lowest in the entire continent. The World Fertility Survey data for Nigeria, as coded by Lesthaeghe et al. (1989), show that the proportion of Hausa women who are single at aged 15-19 is as low as 14 percent in two of three of the regions surveyed. "Hausa girls marry at or before puberty, traditionally by twelve years of age" (Schildkrout, 1986:197). By contrast, two-thirds of the men aged 20-24 are single, making this the largest age gap between spouses in all of Africa. Data for the nearby Kanuri people, also Islamic, are similar: Whereas over 50 percent of young women are married by age 15, the average age at marriage for men is about 30 (Cohen, 1971).

Among the Hausa, devotion to Islamic early marriage is combined with women's nonagricultural employment. Male trades are highly developed; even farmers spend the dry season working in other occupations. Women, by contrast, work within their compounds. Rural women are engaged in work ancillary to agriculture—grain trade (Hill, 1969), cooked food sales, or primary processing—whereas urban women engage primarily in cooking food (Schildkrout, 1986). To complicate matters, women must be secluded within compounds upon or even before marriage, and have little freedom to venture outside to conduct business. Though a woman relies heavily on income from the commercial economy, she usually enters *purdah* (seclusion) upon marriage and cannot go outside the compound to earn, solicit trade, deliver products, or collect payments. How, then, do the Hausa train girls to participate in a highly competitive commercial economy before they must leave home at such an early age? They do so by sharply compressing the training period and starting it when the girls are very young.

To carry on their trade, women in *purdah* depend on children, who run errands, take messages, deliver goods, purchase ingredients, and engage in street hawking. It is very much in their interest, therefore, both to bear children as soon as possible and to begin training these children at precocious ages in marketable skills and responsibilities. "From about the age of four, and sometimes even earlier, children are expected to participate in many adult activities" (Schildkrout, 1986:201). They manage money, collect their own savings, and make items to sell to other children. By the age of marriage, as young as 11, "they are expected to be able to assume virtually all adult responsibilities" (Schildkrout, 1986:215; see also Schildkrout, 1979). The entire learning/training process is intensified and pushed back into childhood for the additional purpose of sexual protection. Northern

Nigeria is the only area in the country for which there is documentation in court records of sexual attacks by adult men on girls. (Of course, any nubile young woman who is outside her compound is likely branded as promiscuous and therefore as inviting attack.) Because it is no longer safe to circulate for trade outside the compound, girls approaching puberty are kept at home. Mothers therefore strive to impart skills quickly to their daughters, before the Islamic ideals of seclusion and early marriage place severe restrictions on their movement.

So urgent is the need to inculcate training, and at the same time to follow religious tenets of seclusion, that female adolescence becomes a highly compressed moment in time, rather than a long, careful span of training. Schildkrout (1979:77) sums up these key features of adolescence for Hausa girls, compared to those for boys:

For boys, there is a long transition period from childhood to adulthood, during which time new occupational skills are learned For girls, . . . [because they] participate fully in housework and in women's income-producing activities from a very young age, and also sometimes carry on small businesses of their own as children . . . there is no transition period in which adult economic roles, distinct from the economic roles performed in childhood, are learned.

These striking patterns of secluded industry constitute what is clearly an unusual case of the constraints on training for adult roles. But they show that as early as marriage and reproduction may begin, training for adult life in such a competitive economy cannot be neglected; if necessary it will be severely compressed and started as soon as possible.

Eastern Versus Western African Trade Apprenticeships

While the Hausa case demonstrates an adaptation of female training regimes to a drastically shortened childhood, the existence of other variations among specialized economies also supports the thesis that entry into childbearing is related to training needs. King (1977) points to some key regional differences that, though described primarily for boys, lend indirect support to this thesis. In eastern Africa, and Kenya in particular, small African-owned industries that were based on intermediate- or low-level technologies began to arise only in the 1930s. After independence, in 1963, the departure of noncitizen Indians made room for their African former employees to go into business on their own, taking on, in turn, their own employees and apprentices who pay fees to be trained. Within what remains a relatively open economic frontier, apprenticeships tend to be short: usually less than a year.

In western Africa, by contrast, trades have deep historical roots. These trades have tended to become the monopolies of certain families, almost

like guilds, which effectively minimize competition by restricting access to the ranks of the skilled. Although minimal fees may be paid, apprenticeships take on the character of long-term indentured labor to a patron, sometimes with elaborate written contracts. Apprentices work for several years, living with the master and providing business and domestic labor. Knowledge is construed as highly secret and as earned only slowly and cumulatively from the master through years of hard work, loyalty, and unquestioning obedience. Training often has distinct stages, and passage from one to another and to final independence is based on the cumulative acquisition of the master's blessings as well as on technical and ritual knowledge (for support of this general depiction of western African apprenticeships, see especially Callaway, 1964; and Dilley, 1989).

Girls plainly have fewer opportunities than boys do to take up trade apprenticeships; but our observations suggest that varied economies may produce for girls, as well, quite diverse forms of training in the social and commercial skills that they cannot learn adequately in earlier childhood or improvise efficiently in adulthood. For girls who *do* take up apprenticeships, especially in areas like Ghana and southern Nigeria, these training activities may be as instrumental as formal schooling in delaying marriage and childbearing.

Rice Farming

Although this chapter focuses on training needs in diverse, nonfarming economies, another way to test the training/fertility thesis is to examine variations in farming types. Rice farming presents an important case. Growing rice appears to require substantially greater knowledge than do other crops on the subcontinent (see Richards, 1985, for descriptions). Because longer training periods might be expected for women, we might expect to find that women marry and begin childbearing later in areas where women participate heavily in rice growing—primarily Sierra Leone, Liberia, and Côte d'Ivoire—than they do in areas with other kinds of farming.

Although direct quantitative evidence to substantiate this point is unavailable, it may be significant that this rice-growing region is the only region of Africa where, before the advent of formal schooling, girls used to be sent off to the women's secluded Sande society for extended periods before they could marry. (Nowadays, initiations last only a few days or a few weeks.) The Sande initiated girls into the mysteries of womanhood; among the kinds of knowledge they were allegedly taught was agriculture, which they were required to practice on the leaders' farms (MacCormack, 1979). Sande society leaders aggressively forbid sexual contacts with men before as well as during initiation. Although it is difficult to estimate the number of potentially reproductive years that initiation consumed, at least until the midtwentieth century, initiation ideally began at puberty (MacCormack,

1977). Because initiation—or labor for Sande officials—could last up to three years, this process delayed entry into parenthood for women in this region substantially beyond the age in areas where girls married at puberty.

Generational Exchanges: Training for Labor

The patterns that these diverse examples bring to light suggest that the range of options in the wider economy and, hence, the extent of training and monitoring strongly affect adolescent fertility. The later marriage and childbearing that so clearly surface in demographic results, particularly in countries such as Nigeria and Ghana with diverse occupational options for women, seem plausibly related to the long training that much of the female population acquires from a senior generation of women who are themselves highly skilled. The need to prepare girls for the long haul in a complex division of labor suggests that formal education is one form of training that delays childbearing; but it is by no means the only one.

To be sure, some forms of apprenticeship and domestic and farm work in Africa may be poor examples of training. Particularly in western Africa some apprenticeships are described as little more than exploitation of young labor: The skills and knowledge learned in these pursuits are alleged to be minimal, in light of the time actually spent in service. The implication is that workers are being retained at low or fictitious wages on the pretext of training needs. (For trade apprenticeships, see Hart, 1975; King, 1977; Bromley and Gerry, 1979. For western African secret societies, see Little, 1948; Gaisseau, 1954; Dennis, 1972; MacCormack, 1979. For an alternative view of Nigerian apprenticeships, see Callaway, 1964.) Indeed, we cannot fully understand the dynamics of either male or female apprenticeship without acknowledging its "cheap labor" function: the possibly disproportionate "training" time that masters demand of students to learn very narrow technical skills. Certainly the Hausa case revealed that girls can be taught complicated commercial skills quickly, if necessary.

Yet even under conditions of obvious exploitation, benefits flow in both directions. In Ghana, the process of learning is inextricably linked to expectations that the learner will work. Although a mother may use her teenage daughter's labor to manage her own commercial activities, families generally provide training or school fees and minimum living expenses (Akuffo, 1987). By contrast with women in southern Africa, where peak periods of work come with early motherhood and older women begin to recede into the background as younger ones take over, West African women who are active as either learners or workers in the labor force appear to have some protection from immediate marriage demands. As a result, whether or not training is a form of exploitation may be irrelevant to fertility outcomes. Whether we call this period "training" or "exploitation," elders in

some societies are maintaining adolescents for several years and withholding them from adult activities and responsibilities. Indeed, that a trader may try to extract the maximum labor from her apprentices simply underscores the undeniable interests she has in preventing their pregnancies.

CONCLUSION

This chapter has argued that the kinds of work opportunities available for women in the wider economy determine the kinds of training that girls will need. In extremely complex African economies, training activities such as trade apprenticeships, ritual initiations, or training in domestic service or Arabic literacy engage a wide range of youth. Because the realm of instructional activity in Africa is far larger than the narrow category of formal schooling, which has absorbed such disproportionate research attention, formal schooling may be only one of many forms of training in a diverse economy that have important bearing on fertility. Most African societies strongly urge young people to postpone marriage and reproduction until they have proven themselves ready to support their own dependents by completing their vital preparations for adult life—whatever forms these may take. In fact, marriage itself may be considered less significant in determining the appropriate time for reproduction than is completing ritual or instructional preparation for adulthood.

To be sure, the source of the impetus for delaying fertility is not clear. Assuming that women make independent decisions about their own reproduction, we typically search for variables in the background of individual women to explain their fertility patterns. The problem with this procedure is that adolescents seldom make career or fertility decisions with complete independence. Instead, training (and, therefore, timing of entry into marriage and childbearing) more accurately represents time and financial support that *adults* are willing to give a girl to enhance her adult work potential, instead of requiring her to marry early to gain the support of a son-in-law and his kin. Whatever its effect on young women themselves, even formal education ultimately reflects the needs of adults and their ability to create a period for training that prepares young women for particular career trajectories.

The person who actually makes the decision about a young woman's future and about supporting her may not be her parent, but may instead be someone in the family with more experience in the outside world: someone who knows about different modern occupations, and about the advantages and risks of pursuing them. This relative may even have to argue with family elders who want to take advantage of an immediate marriage offer and withdraw the girl from training or school. At any rate, *someone* who

has responsibility for a girl is willing to create space for more slowly paced training for her.

With the emphasis shifted from young women themselves toward adults as the power holders in decisions to delay childbearing and marriage, we can turn more specific attention to those adults who are in charge of training itself. It is no accident that the most successful professional women are usually those who gain the most labor from younger women whom they take on as apprentices and assistants. These employers very likely try to control young women's sexuality in order to gain the maximum benefit from their growing strength and skills. Late ages of marriage and childbearing among younger women, then, stem not simply from young women's own desires to continue their training; nor do they necessarily stem from the desires of older women to protect younger ones from men's demands for early sex and marriage. Instead, older people may be creating cultural space for young women to delay childbearing because their work is needed.

We stress that the economy must have niches for which younger women can train. This requirement for economic niches for women appears to be a key determinant of the length and intensity of adolescent training and, therefore, of entry into childbearing. It is a key determinant not because older women become role models but because in economies with marked divisions of labor by sex, it is the older women who train the younger ones in marketable skills—or at least withhold them from marriage and reproduction long enough for them to learn these skills.

The importance of older women using their younger counterparts for their own business labor raises a possibility much like the one Chapter 5 stresses for formal education: Training may lead to lower fertility; but it also may be that young women who manage to avoid pregnancy are able to continue their training. It is even possible that girls who feel exploited in domestic training or apprenticeships may adopt the Botswana schoolgirl strategy—becoming pregnant in order to drop out. We would not argue with either formulation; indeed, both are quite plausible. Whatever the impetus, the end of training likely coincides closely with the beginning of childbearing.

Consequences of Adolescent Sexuality and Childbearing for Mothers and Children

It should not be surprising that adolescents in sub-Saharan Africa, who have the highest rates of fertility for their age in the world, face probably the highest risks of pregnancy-related mortality, of delivery complications, and of premature births or low-birthweight babies. Teenage pregnancy in Africa also has important social and economic outcomes, the most highly publicized of which stem from lost educational opportunities when pregnancy forces young women to leave school.¹ Ideally, an investigation of the consequences of adolescent childbearing and sexuality should cover a wide range of outcomes that affect not only the young mother and her child, but also other family members and society at large. Because there has been

¹While early childbearing in some cases leads to higher child and maternal mortality, it is quite reasonable to assume that it has important effects on population levels and growth, especially in populations that appear to be governed largely by natural fertility. Given what we know about the diversity of African populations, two potential effects of early age at first birth could operate to increase population growth rates. First, areas with very young ages at first birth would very likely have compressed generations that would lead to higher rates of population growth, even if completed family size were held constant (Coale and Tye, 1961). On the other hand, in areas where entry into marriage is delayed, completed family size could be significantly lower (Hobcraft and Casterline, 1983). However, there is little direct evidence on the relationship between age at first marriage and completed family size in sub-Saharan Africa. In any event, the relationship is likely to be weak especially in areas where adolescence is undergoing such flux (see Gyepi-Garbrah, 1985a).

comparatively little systematic research on the subject, we focus on what is best documented: the health consequences for mother and child. Even here, our knowledge is extremely thin on, for example, the incidence of induced abortions in Africa. After treating several other types of consequences more cursorily, we draw some inferences about the consequences of adolescent childbearing under unsanctioned conditions.

Most reproductive health problems experienced by adolescents are also experienced by older women. But they are exacerbated among the young, whether by physical immaturity, primiparity, or social condemnation. Chapter 1 alludes to the two-part typology set forth by Zabin and Kiragu (1992), of childbearing among very young married women and childbearing among young unmarried women who still may be engaged in training. This typology sets the stage for discussing the consequences of adolescent fertility in terms of health and welfare for mothers and children. Because most information that is available concerns the second type, young unmarried women, we focus on that group.

To recapitulate, in societies in which marriage and childbearing are expected to begin early, the majority of pregnancies produce highly valued children. Problems, when they do arise, arise primarily from the mother's physiological immaturity: Babies suffer from low birthweights and birth traumas, and young women are not mature enough to safely carry a fetus to term or to bear a baby. These problems are often compounded by the lack of adequate medical care. Although this pattern of early marriage and childbearing has received considerably less attention than has the emerging problem of pregnancy among urban schoolgirls, the number of women potentially at risk for these problems argues convincingly for including this pattern in any discussion of the consequences of adolescent fertility.

The second high-risk group, young women who become pregnant while still in school or training, or with no supportive men in sight, has emerged more recently; its members have experienced disruptions of standard sequences of education/training, marriage, and childbearing. Most notable examples are unmarried urban schoolgirls who become pregnant. Because this problem attracts so much attention both in the research community and in the popular press, it tends to be identified as the major locus of troublesome adolescent fertility in Africa. Yet both the category of urban schoolgirls and its associated fertility risks are more complex than we might assume. Inasmuch as urban schoolgirls are very young and physically immature they face risks of childbearing similar to those of women in the first group. However, because their risks extend through their education or training, women in this group are probably slightly older, on average, than their counterparts in the early-marriage group. Yet in the case of urban schoolgirls, social condemnation makes them reluctant to seek health services; hence, they suffer additional risks from lack of prenatal care and from

unsafe abortions. They may also suffer an increase in risk of sexually transmitted diseases, although the evidence on this point is thin.

Assessing the consequences of adolescent fertility is fraught with analytical difficulties. How, for example, do we separate the true effects of maternal age from other "compositional" effects? Recent studies (for example, Senderowitz and Paxman, 1985; Strobino, 1987) have stressed that not all pregnancy-related complications experienced by adolescents are attributable directly to age or immaturity. That is, age itself may cause fewer health risks for either the mother or her offspring than the perceived legitimacy of the pregnancy, low socioeconomic status, poor nutrition, inadequate prenatal care, or primiparity. First births, for example, are typically more complicated than higher-order ones are. Teenagers have higher rates of maternal death in part because they have predominantly first births. Even problems such as cephalopelvic disproportion, in which a woman's pelvis is too small to permit a child's head to pass (a condition most frequently observed in young women), can also stem from poor nutrition and stunting in childhood.

Our second difficulty entails distinguishing what seem to be clear-cut causes from consequences. We have already explained why it is unclear whether fertility among adolescents causes or stems from other factors. Even less easily solved is the difficulty in assessing whether two events are related because people responded in a certain way to an exogenous event, or whether individuals, acting in anticipation, actually brought about what appears to be the prior event. To avoid these chicken-and-egg conundrums, we use the term "consequence" in this chapter simply to refer to events that appear to follow temporally the other events.

Another general caution is that the physiological, educational, or economic consequences of adolescent fertility do not occur in a social vacuum. Social contexts shape the consequences of physiological and demographic events in subtle yet profound ways. One much-discussed example of how biology and society interact is the "biosocial gap" between menarche and socially sanctioned childbearing. The wider this gap, the greater the likelihood of conceiving an unsanctioned child.

More generally, society shapes key values that dictate when young women begin bearing children and how their giving birth is regarded by their families as well as by health and welfare services. For very young married women living in rural areas, where society may define early childbearing as normal and even desirable, the social and economic risks of *not* bearing children probably outweigh the physical risks of bearing children. By contrast with remote rural areas, urban areas have better health care facilities, not to mention long-term educational and training opportunities—factors that should, in theory, improve health outcomes for young women and their children. Governments have made marked efforts to create and staff low-

cost clinics for mothers and young children in the last 15 years. Yet although many of the risks of adolescent pregnancy can be offset by affordable prenatal care and the use of contraceptives, adolescents often avoid public medical facilities where their presence would expose the fact that they were engaging in illicit sexual activities. We can appreciate their problems by describing a typical small clinic and what transpires within it.

Most government-sponsored clinics in Africa have what strikes outsiders as an appalling lack of facilities. Many clinics stock only a few medicines; drugs are perpetually "on order." Equipment is minimal. A rural clinic may have an examining bed with a thin covering blanket, a table and chair, a scale, a few syringes, a large roll of cotton bandaging, and some suture material. In the waiting area are a few benches rubbed shiny from years of sitters who slide down to keep their place in line. Yet despite the poverty of their physical resources, most clinics try to maintain cleanliness. Syringes are disinfected; walls with ancient flakes of paint are scrubbed regularly; even dirt floors are swept.

The biggest surprise to outsiders is that despite their lack of facilities, most clinics that keep regular hours are patronized by long rows of patient women who sit or stand in line, sometimes for hours at a time. During days when under-fives are seen, small fussy children—some coughing and feverish, some well and feisty—sit or squirm with their mothers, who clutch tattered yet carefully retained "Road to Health" cards, on which each child's new weight and immunizations will be recorded. On prenatal clinic days, long lines of pregnant women appear, many with small toddlers. As each woman's turn comes, she swings her child onto her hip and enters the consulting area.

Yet the popularity of clinics is also a drawback to adolescents. The consulting area offers little privacy, especially, as is often the case, if it is separated from the waiting area only by a thin cloth. The crowded waiting room is constantly buzzing with gossip: whose child has been sent to secondary school, who was seen alone with whom, who may be pregnant, who is leaving her husband, and so on. The sheer lack of privacy surfaces in other ways as well. Clients know that records are written down and kept and that clinic staff are frequently their neighbors or relatives.

How, then, does a pregnant adolescent with no sanctioned attachment to a man fare in such a setting? Many pairs of eyes shrewdly appraise her condition and exchange contemptuous looks. Some women actually make comments, and all ears are trained to the consulting area as she enters. There, she is likely to be chastised by the attending staff for her condition, and her morals are likely to be loudly questioned. Describing a study of a contraceptives clinic in Ghana, Huntington et al. (1990) provide confirmatory observations:

Especially during the greeting and history-taking sections of the consultations, younger, single women were not treated with the same respect or given the same detailed information as were the older women. These differences seemed to center around the providers' negative attitudes toward young, single women who are sexually active [1990:175].

Unlike older clients, who reported attentive professional services, unmarried adolescents reported open hostility (Huntington et al., 1990). "[N]urses continued to give what were perceived by the younger clients to be lectures on morals, and then summarily dismissed them." The following quotes were collected from younger clients (p. 175):

[The nurse said to me], "Family planning is good for those who have children and want to space them, but since you do not have a child and you are only 18, I cannot give it to you."

Even before I introduced myself, the nurse said adolescents like me are not expected to come for services at her clinic.

She said if she taught us such things we would only use the method to practice [prostitution] and get AIDS.

And if gossip among patients is not intimidating enough, nurses themselves gossip about who recently appeared at the clinic and what they came for. Mojisola Olaneyan's short story "It's Wonderful Being a Girl" (1992, manuscript) depicts such a conversation between two nurses:

"You remember my husband's first wife, right? Her first daughter, Stella, has swallowed the big worm."

"You don't say. You mean she's actually pregnant? That little girl with peanut-size breasts? Hum um, only God knows what this world is turning into," the nurse said, slapping one hand against the other in amazement.

"I wonder with you, my sister. Just the other day, I was watching the pharmacy store for my brother while he ran an errand and in came this young looking thing. She couldn't have been more than sixteen years and guess what she wanted to buy?" She lowered her voice to a whisper, "A packet of condoms!!"

"And did you sell it to her?"

"Trust me," Mama Ade gave a short righteous laugh then continued, "You know such items are not displayed. Anyway I told her there was none and informed her by the way that if I knew her parents I'd close the pharmacy and follow her home."

Not surprisingly, such social pressures make young women extremely reluctant to utilize medical facilities of which they may have considerable need. But although they are reluctant to come to public clinics to obtain contraceptives, it is clear from numerous surveys, including the Demographic and Health Survey (DHS), that unmarried adolescents manage to obtain

contraceptives. Evidence from The Gambia shows that most unmarried young women patronize sources such as pharmacies or shops to obtain their supplies. (In some countries, market traders undoubtedly stock supplies of certain contraceptives.) And young unmarried women who use condoms rely largely on their male partners to obtain them (Bledsoe et al., 1993). Even coming to a prenatal clinic is itself a shameful act—almost an admission of guilt. Not only do few pregnant adolescents attend prenatal clinics; a neighborhood clinic is a place of last resort to an unmarried adolescent who wants contraceptives or to have her baby checked and immunized. (Grandmothers are usually dispatched for this purpose.) Fears of stigma or of losing career opportunities make many young women risk abortion or forgo medical services altogether rather than risk public ridicule. These factors, coupled with their relative immaturity and their first birth experience, put adolescents at high risk for pregnancy problems.

HEALTH CONSEQUENCES OF ADOLESCENT FERTILITY

Considerable research has shown the debilitating, sometimes fatal, results of childbearing by young African women. The following sections document the health complications that adolescent fertility can entail for the mother and for her children.

Maternal Health Complications

Pregnancy-related complications are alleged to cause up to half of the deaths among women of reproductive age in developing countries (Lettenmaier et al., 1988). In many areas, for every woman who dies, between 10 and 15 may suffer long-term damage to health by pregnancy or labor that can cause considerable distress and preclude a normal life (Starrs, 1987; Lettenmaier et al., 1988; Tahzib, 1989). Making such estimates for any developing country is extremely difficult. In Africa, most countries do not have systematic vital registration systems. Hospital-based samples do not represent the complete population at risk because many women without access to medical facilities and those trying to evade attention die elsewhere. Sample surveys in the general population have trouble detecting rare events; and fertility surveys, though they target women, do not record cases of maternal deaths because women who have died cannot be respondents. (Recently created indirect techniques such as the "sisterhood" method may improve estimates; see Graham et al., 1989; Trussell and Rodriguez, 1990).

Despite the lack of precise data, there is little doubt that high birth rates in the absence of adequate health care produce high maternal mortality rates. In parts of Africa, difficult living conditions and inadequate nutrition

and health care, along with high fertility rates, subject women of all ages to very high risks of pregnancy-related illness and death. In 1983, an estimated 126,000 women in sub-Saharan Africa died in pregnancy or childbirth (Royston and Lopez, 1987). The maternal mortality rate (the number of women who die during pregnancy or childbearing for each 100,000 live births) is estimated to be 655 in sub-Saharan Africa, one-and-a-half times greater than the rate in Asia and over thirty times greater than that in northern Europe. Because fertility is generally higher in Africa than elsewhere and because multiple pregnancies mean multiple maternal risks, the average woman, with more than six children, will run a lifetime risk of 1 in 21 of dying as a result of pregnancy. The comparable figure for women in northern Europe is 1 in 9,850 (Graham, 1991).

Although African women as a group run greater risks of maternal mortality and pregnancy-related complications than do women in the rest of the world, their risks are clustered disproportionately in the early years of reproduction, (Senderowitz and Paxman, 1985; United Nations, 1989) or at first deliveries, which would look very much the same in statistics. In Yaoundé, Cameroon, adolescents account for only 28 percent of the obstetric population, yet they account for over 70 percent of obstetric complications (Leke, 1989). In Sierra Leone, 15- to 24-year-old women account for 38 percent of pregnancy-related complications, most of which afflict the 15-19 age group (Senderowitz and Paxman, 1985). In Addis Ababa, Ethiopia, teenagers are twice as likely to die from pregnancy-related conditions as women aged 20-24 (Swedish Save the Children Federation, 1984, cited in United Nations, 1989).

Because a mature physique is important to successful childbearing, we expect to find that young adolescents experience considerably more problems in childbearing than older ones do. Direct evidence for Africa is hard to compile, but U.S. medical findings indirectly support this contention. For example, Moerman (1982) used a longitudinal sample of 90 well-nourished girls in Ohio to measure the growth and development of the birth canal among girls aged 8 through 18. He found that the pelvis was smaller and less mature among girls with early menarche than among girls with late menarche at the same length of time after menarche (p. 528). Moerman concluded that the growth of the pelvic birth canal was associated less with gynecological development than with chronologic age (p. 532) and claimed that the immaturity of the birth canal "may have significance for obstetric risks among young teenage primiparous girls" (p. 528).

Studies of mortality among African women provide some further, often indirect, evidence. Starrs (1987) found that adolescents in Africa under the age of 15 are five to seven times more likely to die in pregnancy and childbirth than women aged 20-24. In a study of over 22,000 births in Zaria, Nigeria, Harrison et al. (1985) found that maternal mortality was

between two and three times higher for women 15 and under than for women from 16 to 29.

In developing countries in general, complications during delivery directly cause about three-quarters of all maternal deaths. The remaining quarter result from medical conditions that were aggravated by pregnancy, such as viral hepatitis, anemia, and cardiovascular disease (Herz and Measham, 1987). Several medical complications account for the majority of direct obstetric deaths and injuries: eclampsia, sepsis, obstructed labor, hemorrhage, fistulas, and unsafe abortion. In Africa, many of these complications are most severe among very young women. Two factors appear to be principally responsible: physical immaturity and the tendency, especially among young women whose pregnancies are socially disapproved, to avoid or delay treatment at an appropriate medical facility.

Eclampsia

Eclampsia, or toxemia, may begin in the second or third trimester with high blood pressure, fluid retention, and protein in urine. Left untreated, full-blown eclampsia can result in extreme hypertension, convulsions, or cerebral hemorrhage. Eclampsia is largely preventable with appropriate prenatal care. Once it develops, however, it requires immediate treatment. Yet even when medical care is available, complete recovery is far from certain. In developed and developing countries 5 to 17 percent of women with eclampsia die; survivors may suffer congestive heart failure, paralysis, blindness, chronic hypertension, or kidney damage (Lettenmaier et al., 1988). Eclampsia is particularly common among young women and women having their first child. A study of women pregnant with a first child in Zaria, Nigeria, reports that 17 percent of those aged 14 or under and 10 percent of those aged 15 to 16 developed eclampsia, compared with only 3 percent of those aged 20 to 29 (Harrison et al., 1985).

Sepsis

Sepsis (severe infection) following childbirth or attempted abortion is common in developing countries. The probability of infection increases with prolonged labor. Infections can be compounded by endemic diseases, such as malaria and tuberculosis, and by existing conditions, such as anemia, that are most common among young mothers (Harrison et al., 1985). There is some evidence to suggest that women who suffer severe infections later face higher risks of pelvic inflammatory disease, ectopic pregnancy, infertility, and chronic pelvic pain (Lettenmaier et al., 1988). Women with uncomplicated vaginal deliveries usually do not become infected unless they have sexually transmitted diseases; but very young mothers, because they have more complicated deliveries, suffer greater risks of sepsis.

Obstructed and Prolonged Labor

Obstructed and prolonged labor requires treatment at medical facilities that can perform surgery. Young adolescents are particularly vulnerable to obstructed labor because of their immature physiques. One of the most serious of such complications is cephalopelvic disproportion. In a study in Kasongo, Zaire, teenage women accounted for 34 percent of all births, but they accounted for 42 percent of all women with life-threatening fetopelvic disproportion and for 48 percent of women with abnormally long labor (van Lerberge et al., 1984, cited in United Nations, 1989).

Another cause of obstruction is the scar tissue that forms after a woman has been circumcised (International Center on Adolescent Fertility, 1992)—whether by simple clitoridectomy or infibulation, which involves the complete removal of the clitoris, labia minora, and labia majora, and stitching the two sides together. The scar tissue may prolong labor and create serious complications during delivery and possible brain damage to the child (Minority Rights Group, 1980, cited in Kouba and Muasher, 1985). Adolescents are especially susceptible to this condition since most first births occur among this age group. Research on the health aspects of female circumcision is hindered by the culturally sensitive nature of the subject and the secrecy that surrounds the practice. It is unclear, for example, whether the obstetric risks are not simply a function of scar tissue impediments but also of the age at which the operation is performed. This age varies from as early as the sixth day of life in Yoruba tradition to as late as shortly before the birth of the first child among the Aboh in midwestern Nigeria (Kouba and Muasher, 1985).

Hemorrhage

Hemorrhage is one of the most common causes of maternal death. A sudden hemorrhage requires immediate treatment at a health facility capable of providing blood transfusions and performing other clinical measures—treatment that is not readily available to most African women. Hemorrhaging is most common just after delivery. It can be caused by prolonged labor, early separation of the placenta from the uterine wall, a rupture or tear in the cervix or the vagina, or a poorly performed abortion; many of these are conditions to which young mothers are most susceptible (Lettenmaier et al., 1988). In some African countries, patients fortunate enough to receive a blood transfusion face the added risk of contracting HIV (human immunodeficiency virus) or hepatitis B through unscreened blood.

Fistulas

Fistulas, one of the most devastating obstetric injuries, are perforations between the vagina and the rectum or urethra that allow urine or feces to

leak continuously through the vagina. Women with fistulas suffer from incontinence and persistent odors caused by stale urine or excreta. Victims are frequently ostracized by both their husbands and the community. Surgical repair is possible but rarely available. Most fistulas are caused by prolonged and obstructed labor, particularly labor complicated by cephalopelvic disproportion. Very young mothers are most susceptible. One study in Kenya found that 45 percent of all victims of vesicovaginal fistulas were adolescents (World Bank, 1989, cited in Zabin and Kiragu, 1992). In northern Nigeria, of 1,443 women admitted to Ahmadu Bello Hospital requesting reparative surgery, 33 percent were 16 and under and another 22 percent were aged 17 to 19 (Tahzib, 1983).

Abortion

Abortions pose very grave health risks to adolescents in Africa. Abortion-related deaths are a major component of maternal mortality. A study at Lagos University Teaching Hospital in Nigeria found that 51 percent of maternal deaths were attributable to abortion complications (Akingba, 1971). In studies conducted in Addis Ababa, Ethiopia, and Lusaka, Zambia, abortion was identified as the cause of a quarter of all maternal deaths (Lettenmaier et al., 1988).

While abortion rates are believed to be high and rising throughout the general population (Coeytaux, 1988), there are shocking estimates of abortion rates among young unmarried women. Precise levels, of course, remain unknown. The vast bulk of research comes from hospital-based samples that reveal nothing about women who do not come in contact with medical services. Of women under age 20 in Accra who went to the hospital to deliver a second pregnancy, about a quarter had had their first pregnancy terminated by an illegal induced abortion (Janowitz et al., 1984). At the University of Calabar Teaching Hospital, 72 percent of women who presented for induced abortion were adolescents aged 13-19, the majority unmarried (Archibong, 1991). Similar observations have been made in Ghana, Kenya, Tanzania, Mali, Zaire, Liberia and Benin (see, respectively, Ampofo, 1970; Aggarwal and Mati, 1980; McKay, 1984; Burton, 1985; Nichols et al., 1987; Avodagbe, 1988). It is estimated that in Cameroon, 18 percent of all adolescent pregnancies lead to abortion (Leke, 1990; République du Cameroun, no date). In Nigeria, abortion is the preferred course of action in 90 percent of pregnancies among unmarried working women (Odejide, 1986). Another Nigerian study reports that of 1,800 never-married females ages 14-25, nearly one-half of the students and two-thirds of the others had been pregnant (Nichols et al., 1986). Nearly all had terminated their pregnancies with an induced abortion.

In theory, abortion should be quite rare in sub-Saharan countries because it is either illegal or quite restricted (see Tables 7-1 and 7-2). Of 38

TABLE 7-1 Legal Status of Abortion in Sub-Saharan Africa, 1989

Country	Illegal, No Exceptions	Legal for Medical Reasons			Legal for Other Reasons		
		Life	Health ^a	Eugenic	Juridical	Socio- economic	On Request ^b
Angola	-	X	-	-	-	-	-
Benin	-	X	-	-	-	-	-
Botswana	-	X	-	-	-	-	-
Burkina Faso	X	-	-	-	-	-	-
Burundi	-	X	X	-	-	X	-
Cameroon	-	X	X	-	X	-	-
Central African Republic	-	X	-	-	-	-	-
Chad	-	X	-	-	-	-	-
Congo	-	-	X	-	-	-	-
Côte d'Ivoire	X	-	-	-	-	-	-
Ethiopia	-	X	X	X	-	-	-
Gabon	-	X	-	-	-	-	-
Ghana	-	X	X	X	X	X	-
Guinea	-	-	X	-	-	-	-
Kenya	-	-	X	-	-	-	-
Lesotho	-	-	X	-	-	-	-
Liberia	-	X	X	X	X	-	-
Madagascar	-	X	-	-	-	-	-
Malawi	-	X	-	-	-	-	-
Mali	-	X	-	-	-	-	-
Mauritania	X	-	-	-	-	-	-
Mozambique	-	X	-	-	-	-	-
Namibia	-	-	X	X	X	-	-
Niger	X	-	-	-	-	-	-
Nigeria	-	X	-	-	-	-	-
Rwanda	-	-	X	-	-	-	-

Senegal	-	X	-	-	-	-	-
Sierra Leone	-	-	X	-	-	-	-
Somalia	-	X	-	-	-	-	-
South Africa	-	-	X	X	X	-	-
Tanzania	-	-	X	-	-	-	-
Togo	-	X	-	-	-	-	-
Uganda	-	-	X	-	-	-	X
Zaire	-	X	-	-	-	-	-
Zambia	-	-	X	X	-	X ^c	-
Zimbabwe	-	X	X	X	X	-	-

NOTE: - = condition does not apply; X = condition applies.

^aIn countries where abortion is permitted if necessary to protect a woman's health, the law may not specifically state that condition.

^bIn countries where abortion is permitted on request, it is also permitted where necessary to protect a woman's life or health, and on eugenic, juridical, and socioeconomic grounds.

^cPermitted before viability of fetus.

SOURCE: Ross et al. (1992).

TABLE 7-2 Conditions for Performing Legal Abortion and Average Price of Abortion, Sub-Saharan Africa, 1980

Country	Required Approval			Must Be Performed by Physician	Maximum Gestation (weeks)	Average Price (U.S. dollars)	
	None	Committee	Husband			Public	Private
Benin	U	U	U	U	U	U	63
Botswana	-	-	X	-	U	U	U
Burundi	-	X	X	X	12	U	173-259
Cameroon	-	-	-	X	18	U	94-470
Central African Republic	U	U	U	U	U	U	78-313
Chad	-	-	X	X	U	U	157
Congo	U	U	U	U	U	U	78
Côte d'Ivoire	NA	NA	NA	NA	NA	NA	94-219
Ethiopia	-	-	-	X	U	U	U
Ghana	-	-	X	X	10	0	19-37
Kenya	U	U	U	U	U	NA	232-463
Lesotho	U	U	U	U	U	NA	38-115
Liberia	-	X	-	-	U	U	U
Madagascar	U	U	U	U	U	U	19
Mali	U	U	U	U	U	U	31-157
Mozambique	-	X	X	U	U	25	50-60 ^d
Nigeria	U	U	U	U	U	U	14-41
Senegal	-	X	-	X	U	U	157-188
Tanzania	-	-	X	-	12	0	10-52
Togo	-	-	X	X	U	0	47-157
Zaire	U	U	U	U	U	U	77
Zimbabwe	-	X	X	X	U	U	47-95

NOTE: U = unknown; NA = abortion is illegal or not offered in the public sectors; - = condition does not apply; X = condition applies.

^dPrivate health services are officially illegal in Mozambique.

SOURCE: Ross et al. (1992).

countries surveyed in 1989 by Ross et al. (1992), only 9 legally permitted abortion for reasons other than health or eugenic threat; of these 9, only Togo allows abortion on request and only Cameroon does not require the approval of the husband or a committee. Even in Zambia, where abortion is legal, a woman must obtain written consent from three physicians (Castle et al., 1990). South Africa has a similar law, the Abortion and Sterilization Act, and according to one review (Nash, 1990), only one-third of the requests for an abortion for mental reasons were approved.

One consequence of such formidable laws is to impede efforts to obtain reliable information about abortions, many of which, because of the laws, are illegal. Despite the understandable reluctance on the part of women to discuss abortions, many studies find that abortions stem from pregnancies for which paternal recognition is a problem (see, for example, Nichols et al., 1986; Nichols et al., 1987; Caldwell and Caldwell, 1988; Coeytaux, 1988; Kulin, 1988; Baker and Khasiani, 1992). In many countries, the majority of women who seek abortions are single adolescents (see Caldwell and Caldwell, 1988). Many are unemployed or underemployed (see, for example, Lema and Kabeberi-Macharia, 1990), or are desperate to stay in school. Oppong (1991) stresses that young women's opportunities for schooling, training, and employment are jeopardized by pregnancy, but

... there is evidence that the few who manage to stay in school, training, and initial stages of employment may do so at the expense of their reproductive health, through resorting to life threatening, non medically, [sic] supervised abortion procedures [Oppong, 1991:30].

Another result of banning abortion is to make those that do occur more dangerous because illegal abortions have much higher rates of complication than legal procedures do (Zabin and Kiragu, 1992). Adolescents may seek out trained health care workers who, fearing legal repercussions, may try to create dangerous medical emergencies that warrant a legal abortion. In Zambia, at least one-quarter of all the women with abortion complications in the University Teaching Hospital in Lusaka, Zambia, had tried to induce abortions by inserting objects in the cervix such as plants or twigs, drinking detergents or gasoline, or taking large overdoses of aspirin, chloroquine, and other toxic substances (Castle et al., 1990). Private physicians sometimes induce abortion illegally by inserting a device and instructing the woman to go to the hospital to complete the procedure. The consequences can include hemorrhage, perforation, infection, and visceral and cervical injury. Left untreated, many of these complications can cause sterility or death (Zabin and Kiragu, 1992). Nearly 15,000 operations were performed in South Africa in 1987 to follow up incomplete abortion (Nash, 1990).

Although properly administered abortions are no more dangerous to adolescents than to other women, abortion is particularly lethal among young

women for three principal reasons. First, young women face severe problems of confidentiality and legal roadblocks that make them more likely to resort to illegal abortions. Using responses from 264 women requesting termination of pregnancy or treatment of abortion complications at the University Teaching Hospital in Zambia in 1985 and 1986, Likwa and Whittaker (no date) found that 60 percent were aged 15-19.

Second, few adolescents have ready cash to pay for abortions by licensed practitioners; most resort to cheaper but more dangerous methods. They may go to semiskilled practitioners or attempt self-induced abortion.

The third reason why abortions are dangerous grows partly out of the first two. Adolescents tend to postpone abortion attempts longer than older women do (Center for Population Options, 1992)—beyond the first 12 weeks of pregnancy, the period when abortion is safest (for example, Oyieke, 1986, cited in Lema and Kabeberi-Macharia, 1990). Their reasons for delaying are unclear, but they may include denial of the condition, hope that spontaneous miscarriage will occur, fear of sanction, or the expense of obtaining an abortion. Young women also tend to delay obtaining help if complications ensue after an abortion, for similar reasons. For example, the average cost of treating an illegal septic abortion in Ibadan, Nigeria, has recently been estimated to be U.S. \$200, in an area where the typical monthly salary is U.S. \$45 (Konje et al., 1992).

Laws that restrict access to abortion may, therefore, simply drive the practice underground: Young women attempt self-induced abortions or seek out untrained health care providers, who may work in unsanitary conditions. Caught between losing a prosperous economic future and risking their lives, schoolgirls face limited options. Gyepi-Garbrah (1985b:45) sums up their problem:

If she is a student she faces the dilemma of having to choose between procuring an illegal abortion, most likely from an unqualified abortionist with all the attendant complications, or carrying her pregnancy to term and risk expulsion from school, an option that will expose her to shame and embarrassment, lower future social and economic mobility, in addition to facing the risks associated with early childbirth.

Some evidence, though sketchy, points to critical social differences between young women for whom abortion is not risky and those for whom it poses great risk. Women who encounter the most danger are more likely to be unmarried, less well-off, and perhaps less educated than others; these women are most likely to seek abortions that are cheap and therefore illegal. Most of the evidence on this point is oblique. Joseph (1979) suggests that in countries whose laws on abortion are not liberal, one needs money to obtain a safe abortion by a qualified practitioner. Lema and Kabeberi-Macharia (1990) imply that in Kenya "highly paid women who are . . .

professionals" are able to come up with the funds quickly to pay for abortions that are carried out both early and by private, experienced medical personnel (1990:119, 127). These key advantages sharply reduce the risks of well-to-do women. Moreover, these abortions ". . . may not be on any record and therefore we may never get to know the actual magnitude of abortion in Kenya" (p. 119). It is likely as well that some wealthier girls are able to finish their education because they are able to afford safe abortions.

As this discussion has revealed, the costs and risks of abortion often stem less from abortion itself than from the social and economic conditions that make safe abortion impossible. Such costs reach far beyond the individual women involved. Treating poorly performed abortions places enormous pressure on the already stretched health systems throughout the region. Coeytaux (1990) speculates as well that making abortion difficult to obtain may lead women to resist family planning in some instances. A young woman who has had an abortion is quite likely to begin to use contraception; but if she has unknowingly been made sterile by a poorly performed abortion and later tries unsuccessfully to conceive, she may attribute her infertility not to the abortion but to the contraception. Hearing of her difficulty, others may abandon contraception as well.

Sexually Transmitted Diseases

Sexually transmitted diseases (STDs), though less directly connected with childbirth, constitute yet another medical risk that is closely associated with sexual activity among adolescents. Left untreated, STDs can lead to pelvic inflammatory disease, miscarriage, infertility, or ectopic pregnancy. A high incidence of STDs underlies the historically high levels of infertility in many parts of Central Africa (Frank, 1983).

If sexual contacts outside the marriage process are becoming more prevalent, then larger numbers of adolescents may be exposed to the risk of sexually transmitted diseases, including AIDS. In addition, the period in which adolescents are exposed to these risks appears to be lengthening. If the age at menarche is indeed declining, as happened in the West, the age at which girls begin to encounter sexual and reproductive health problems could be lower. At the other end of adolescence, age at marriage may be rising. This widening of the biosocial gap between onset of sexual maturity and marriage could increase the risk of health problems.

Some evidence suggests that adolescents are biologically more susceptible than older women to STDs. One reason for higher susceptibility is a greater exposure of cervical epithelial tissue at the opening of the vagina into the cervix in the adolescent years (Zabin and Kiragu, 1992). A second reason is that a young man or woman may have a previously unchallenged

immune system that therefore has not mobilized defenses against infection (Zabin and Kiragu, 1992). Yet how to weigh physiological factors against the complications posed by behavioral and social factors is unclear. Certainly adolescents who begin sexual relations at an early age and have multiple partners expose themselves to great risks. A recent survey reported that in a rural district in Uganda, 50 percent of women aged 13-19 living in main-road trading centers were seropositive for HIV (Wawer et al., 1991). In Monrovia, Liberia, a 1984 survey found that 23 percent of female students and 29 percent of male students aged 18-21 reported having had a sexually transmitted disease (Nichols et al., 1987), and in a Cameroon study of sexually active high-school students, one-quarter of the females and one-third of the males reported having had an STD (Mafany, 1989, cited in Zabin and Kiragu, 1992). In a 1989 survey of pregnant women in Dar es Salaam, Tanzania, women aged 13-19 were one and a half times more likely to be infected than women 30-34 (U.S. Bureau of the Census, 1992). In some areas, women contract HIV at younger ages than men, often during adolescence, because of the age gap between sexual partners. For example, a nationwide survey in Uganda during 1987-1988 found that women aged 15-19 were more than twice as likely to be infected than men the same age, and women aged 20-24 were one and a half times more likely to be infected than men the same age (U.S. Bureau of the Census, 1992).

A more far-reaching implication of the spread of AIDS for adolescents, though one less easily documented, is that heightened concern and awareness about AIDS may be exposing adolescents to greater risk of contracting the disease. Older urban males, who themselves may be HIV positive, may seek wives and sexual partners among very young girls, because they will have had fewer sexual contacts and thus are less likely to be infected (Zabin and Kiruga, 1992). This same motive may also exert downward pressure on the age of marriage for girls (Panos Institute, 1989).

Many adolescents lack basic information concerning the symptoms, transmission, and treatment of STDs. Owie (1985) reports that over one-third of adolescents in his study in Nigeria believe that treatment for an STD is unnecessary once the symptoms have disappeared, and that gonorrhea and syphilis are interchangeable names for the same disease. Drawing on a sample survey, Wilson et al. (1988) reported that 40 percent of high school students in Zimbabwe believed that AIDS in Africa is confined primarily to homosexuals. A similar proportion was unaware that HIV carriers may appear healthy. Ignorance surrounding symptoms or treatment decreases the likelihood that adolescents will seek timely treatment, and thus increases the risk of contagion and transmission.

Health Consequences for Children

The new DHS data leave few doubts that children born to very young mothers suffer disproportionate risks of morbidity and mortality, though whether the primary factor is the age of the mother, the high proportion of first births, or some other characteristic, is not clear. Table 7-3 shows infant mortality rates by age of mother. In 10 of the 11 countries for which DHS data are now available, infants of young mothers (aged less than 20) experience higher mortality than do children of mothers aged 20-29. In seven countries the differential exceeds 20 percent; in four it exceeds 50 percent. Child mortality (deaths at ages 1 to 4), though lower, continues the pattern of increased risk among children of adolescent mothers. The differences in risk ranges from under 10 percent in Senegal and Togo to 25 percent and over in Botswana and Uganda.

Other studies confirm that infants born to adolescent mothers are more likely to be born prematurely and to have low birthweight (Arkutu, 1978; Ngoka and Mati, 1980; Sanghvi et al., 1983; Adedoyin and Adetoro, 1989). Low birthweight can lead to life-long neurological problems and slower development (Senderowitz and Paxman, 1985), and it is the single best predictor of neonatal mortality. Approximately two-thirds of neonatal deaths occur among infants weighing less than 2,500 grams at birth (United Nations, 1989).

Although the DHS data indicate mortality differences for children of adolescent mothers, the age of the mother may be a smaller causal factor than are primiparity, inadequate prenatal care, low socioeconomic status, and the perceived legitimacy of the birth (Haaga, 1989; National Research Council, 1989; Zabin and Kiruga, 1992).

Multivariate techniques can provide some insight into the importance of maternal age. Using data collected during the late 1970s from 34 developing countries, Hoberaft et al. (1985) examined the risk of child mortality by controlling for the potentially confounding effects of mother's education and her age at birth and for the child's sex, birth order, and birth interval. They also controlled for survival of the previous and the subsequent birth. (Whether the mother obtained prenatal care, however, was not controlled, nor was her marital status.) Even after introducing these controls, the study found that the average relative risk of mortality for children in the first month of life of mothers aged 15-19 was 24 percent higher than the risk for those of mothers aged 25-34. The relative risk of dying was even higher among children between 12 and 24 months of age, implying that environmental factors associated with early childbearing might be even more important than physiological ones. In a subsequent paper Hoberaft (1987, cited in United Nations, 1989) identified differentials in child mortality risks for women under 20 years of age for five sub-Saharan African coun-

TABLE 7-3 Infant and Child Mortality, by Age of Mother, Selected Sub-Saharan African Countries: Number per 1,000 Live Births

Country and Age of Mother at Time of Birth	Reference Period ^d	Infant Mortality (0 to 11 months)	Child Mortality (1 to 4 years)
Botswana	1978-1988		
<20		35	22
20-29		42	16
Burundi	1977-1987		
<20		138	129
20-29		87	108
Ghana	1978-1988		
<20		97	95
20-29		73	80
Kenya	1979-1989		
<20		68	44
20-29		55	36
Liberia	1976-1986		
<20		177	110
20-29		155	97
Mali	1977-1986		
<20		177	195
20-29		116	166
Nigeria	1981-1990		
<20		121	123
20-29		79	107
Senegal	1976-1986		
<20		119	134
20-29		83	130
Togo	1978-1988		
<20		90	93
20-29		79	85
Uganda	1978-1988		
<20		120	117
20-29		104	92
Zimbabwe	1978-1988		
<20		78	36
20-29		47	31

^dExcept in the cases of Mali and Nigeria, the rates are based on the calendar year of the survey up to the month preceding the date of the interview.

SOURCE: Demographic and Health Surveys Standard Recode Files, weighted data.

TABLE 7-4 Relative Risk of Child Mortality, by Age of Mother, Selected Sub-Saharan African Countries

Country	Age of Mother	
	<18	18-19
Cameroon	1.2	1.0
Côte d'Ivoire	1.4	1.2
Kenya	1.5	1.2
Lesotho	1.2 ^d	1.1
Senegal	1.1	1.0

NOTE: The relative risk is the ratio of the mortality rate for children aged 0-5 years born to mothers of the given age to the mortality rate for children born to mothers aged 20-24. The controls were age of mother, birth order, birth interval, survival of the preceding and the subsequent child, sex of the child, and mother's education.

^dBased on fewer than 500 cases.

SOURCE: Adapted from United Nations (1989).

tries. His findings, reproduced in Table 7-4, show a greater risk in every country for women under 18 than for women aged 18-19. They suggest that there is indeed an independent effect of maternal age on child mortality.

Besides factors such as physical immaturity and primiparity, the mother may be unable to afford medical care. In this context, a crucial factor affecting a child's risks appears to be paternal support. Gyepi-Garbrah (1985a) contends that children born out of wedlock are at particularly high risk because many are born into poverty and suffer from malnutrition and disease, both of which can impair their intellectual and learning capabilities. Meekers (1988) provides some corroboration. Using the Côte d'Ivoire Fertility Survey of 1980-1981, Meekers finds that children born before cohabitation have higher mortality levels than children born to women who are living with men, whether or not they are the fathers.

SOCIOECONOMIC CONSEQUENCES OF ADOLESCENT FERTILITY

In the tightly woven fabric of African societies, adolescent fertility has consequences beyond the repercussions for the young women and their families. Adolescent childbearing, and the illnesses and debility that sometimes accompany it, can impose heavy costs on the society itself. We take up these matters in the following sections.

Consequences for the Mother

Although fewer girls might drop out if less stigma were attached to being pregnant in school, in Africa teenage childbearing usually brings an abrupt halt to a young woman's formal education, as Chapter 5 has shown. A few girls find ways to resume their education after giving birth, but the overwhelming majority do not. Policymakers worry about the economic consequences of these dropouts from both macro and micro perspectives. At the macro level, high female dropouts rates imply lost societal investments in education, a topic too complex to assess here. At the micro level, early pregnancy can mar the socioeconomic prospects of girls who had planned to complete their educations. Low levels of education stemming from early motherhood may confine these girls to low-paying, unskilled jobs and to low socioeconomic status. However, we have no direct evidence of these connections, and recent research on teenage childbearing in the United States highlights the difficulties of documenting causal sequences (Hayes, 1987).

In fact, in some cases an early premarital pregnancy may be welcome. In an uncertain job climate, a young woman may see clear advantages in bearing a child, whether to prove fertility after a certain age (see, for example, Dynowski-Smith, 1989; République de Côte d'Ivoire, 1990) or to cement conjugal ties to a certain man. Young women often see no disadvantages to teenage childbearing, and young women and their boyfriends are often happy with a pregnancy (Dynowski-Smith, 1989; see also Agouké et al., 1990; Gohy, 1990).

It is important to stress as well that contextual factors affect the impact adolescent fertility has on educational achievement. A key example concerns differences in class and wealth. Whereas most women leave school permanently when they become pregnant, differences among social classes in ability to pay for a safe abortion or child care, not to mention advanced schooling, determine who can and cannot go on with schooling. Thus, the readily available opportunities for good education for girls from well-to-do families may discourage adolescent fertility. By contrast, the slim chances of getting a good education may, along with other factors, encourage girls from poor families to become pregnant. These girls are often least able to keep up the academic pace because demands on them for help in the household leave them little time to study. They are also least able to buy essential materials for school or to enroll in expensive private schools that scrupulously monitor students' comings and goings. Enrolling in schools with fewer qualified teachers and poorer teaching resources, they may perform poorly on national achievement tests, though we have no direct evidence for this comparison. It should not be surprising that such girls decide that ties

with men through pregnancy, may be more advantageous than continuing schooling.

Effects on Fostering

Adolescent fertility may have an effect on child fosterage. Bearing children without firm paternal recognition is likely to have an especially important effect, although few surveys inquire about this matter. Lacking such data, we have used the DHS to examine the percentage of first-born children under age 5 living away from their mothers by mothers' marital status (Table 7-5). The results are mixed. In Liberia, Senegal, Togo, and Zimbabwe, unmarried women foster their small children out more than mar-

TABLE 7-5 Percentage of Children Living Away from Their Mother, by Mother's Marital Status

Country	Never Married	Ever Married	Total
Botswana	11 (199)	15 (38)	12 (237)
Burundi	7 (3)	4 (19)	4 (23)
Ghana	3 (32)	4 (136)	4 (168)
Kenya	2 (114)	3 (247)	3 (361)
Liberia	16 (171)	11 (250)	13 (421)
Mali	0 (1)	5 (239)	5 (240)
Senegal	9 (23)	4 (240)	5 (263)
Togo	20 (30)	2 (132)	6 (162)
Uganda	5 (53)	9 (330)	8 (383)
Zimbabwe	16 (38)	9 (140)	11 (178)

NOTE: Figures in parentheses refer to the number of children on which the percentages are based. The mothers were aged 15-19 at the time of the survey.

SOURCE: Demographic Health Surveys Standard Recode Files, weighted data.

ried women do. The reason may be that children from previous partnerships (whether or not these were defined as marriages) are obstacles to subsequent unions or to the resumption of education or training. Alternatively, unmarried women could be poorer than married ones and need help with child care. Page (1989) reports similar findings, although she focuses primarily on marital dissolution rather than marital status per se. On the other hand, in Ghana and Kenya, there are no appreciable differences in fostering by mother's marital status, while in Botswana and Uganda, married women aged 15-19 foster out children more than unmarried women do.

Effects on Social Mobility of Children

The relations of social class and rank to demographic outcomes are profoundly underdocumented in modern Africa. Ranking deeply affected social life in the precolonial era, including even the ranking of wives in polygynous marriage. Wives were explicitly ranked by the functions they performed (see Laburthe-Tolra, 1981, for southern Cameroon), by order of marriage to the household head, or by the politics of the alliance that the marriage forged (for Swazi royal marriage, see Kuper, 1986). Because polygyny has failed to decline in the fashion expected by modernization theorists (van de Walle and Kekovole, 1984), implicit or explicit ranking processes may still affect both wives and their children. The logic of ranking principles in polygynous marriages has important implications for demography. Bledsoe (forthcoming) contends that polygynous husbands are constantly assessing the advantages to themselves and the wider family that can be tapped by promoting one or another relationship. A man may take a new wife with a view to developing connections; an older wife's children may be diligently educated by virtue of her own origin or her children's intellectual capacities; another woman, whose own family is of low status, may be denied a formal union, and thus she and her children may be consigned to managing a rural farm or stripped of inheritance rights. In these ways, the opportunities available to a family's members may become sharply differentiated, and responsibilities toward particular family segments may slacken.

What these observations mean for adolescence is that the children of socially distant fathers may receive little education and may have trouble raising bridewealth (if male) or becoming a first wife (if female). Indeed, in societies with few occupational alternatives, uneducated women need to bear children to create connections they otherwise lack and to add proven fecundity as an attribute of status to their meager resources (Guyer, 1988b). Indirect evidence from western Kenya suggests that emerging patterns of premarital birth and polygynous marriage among schoolgirls may be so motivated (Division of Family Health/GTZ Support Unit, 1988). A young unmarried woman who has a child by a youthful father may find that her

best option lies in becoming a junior wife to an older polygynist who is willing to accept the child.

Lifetime Consequences of Having No Acknowledged Father

As we have seen, most children born before the marriage process is concluded are still actively desired by their fathers. For a child whose father avoids paternal responsibilities, however, a number of economic and social obstacles emerge. In rural areas where acknowledged parentage defines a person's status in relation to land, being without an acknowledging father almost inevitably creates hardship. However, in Cameroon, children born before marriage may be separately legitimized by their fathers. Among the Beti, these children otherwise depend on whatever ad hoc terms can be struck with their maternal kin, terms that imply a tenuous right to land (Guyer, 1984). When land is scarce or land values are rising, the claims of children with incomplete parentage may take low priority or be contested by those with stronger claims. Increased differentiation within rural population would likely result, along with the urban migration of people who have few meaningful ties to the countryside.

It is not clear whether premarital births are considered more problematic in urban or rural areas. Longmore's observations for South Africa a generation ago (1959) suggest that urban fathers made clear distinctions between their children by legitimate versus nonlegitimate unions. In The Gambia, however, administrators of an adolescent fertility survey limited their study to Greater Banjul because they considered premarital pregnancies to adolescents a more significant problem in the major urban area than in rural areas (Gambia Family Planning Association, 1988). Greater tolerance for premarital fertility in urban areas, if this is indeed the more predominant pattern, may stem less from the assumed power of forces of modernity or instability in urban areas than because of the differing importance of fatherhood in rural and urban property systems.

Aside from inheritance issues, the more extreme results of ranking may account for cases of neglected housegirls, street children, and young prostitutes. The consequences of having no acknowledged father, or a loosely attached one, can be disadvantages for children that may subsequently pass from one generation to the next. A young woman who has only a marginal attachment to a man, who comes from a family of low status, or who has little education may have considerably more trouble supporting a daughter with unrecognized paternity through an extended period of "maidenhood" than would a better-endowed partner of the same man. A child with weak kinship supports clearly falls low in the ranking hierarchies and is forced into coping mechanisms that may include early sexual relations and early childbearing outside of marriage. Some literature, moreover, has suggested

that households headed by women create more such households in the next generation, although the issue is controversial (see Peters, 1983, 1984; Kerven, 1984; and Handwerker, 1991).

DISCUSSION

As adolescent girls increasingly attend secondary school or work, whether in the formal or the informal sector, they are exposed for longer periods to the risk of early, unsanctioned pregnancies that can impede their prospects for success as adults in the rapidly changing economies in which they live. A pregnancy that might fit into a usual sequence of events leading to marriage does not fit when the father is a schoolmate or an older man with little interest in supporting the young woman or her child. If a girl had wanted to remain in school, her expulsion is a double loss: first of scarce national resources allocated to increase the modest number of secondary school graduates; and second of opportunity for the young woman herself. Now, having a child and probably being unable to complete school, her choices may be limited. Her appeal in the urban marriage market diminished, she may become the second or third wife of an older man, perhaps one living in a rural area, or she may take up an informal, less prestigious union with an educated man.

Yet it is impossible to reach confident conclusions about the lifetime effects of adolescent fertility in general and unsanctioned adolescent fertility in particular. Because most pregnancies of adolescents are highly desired, it may be disastrous for young women in many situations to postpone childbearing past the teen years. Especially for married teens, their childbearing capacities may be highly suspect in the absence of a birth, but even unmarried teens who have not given birth might be cast both as bad prospects as wives and as possibly infertile. Becoming pregnant while in school has overwhelmingly negative consequences for adolescents who want to continue their education and whose educational aspirations are supported by their families. To stay in school, they must obtain an abortion that is likely to entail great medical risk. Nevertheless, for only a small minority of young women in Africa will dropping out of school curtail their life chances. The vast majority undoubtedly find that the need to find a suitable husband and begin a family outweighs the risk of losing opportunities for further education and career training. It may even outweigh the possible health risks of early childbearing. For such women, the social and economic consequences of *not* bearing children are immense.

But just as some urban schoolgirls may be better off becoming pregnant and dropping out of school, many young mothers at the other end of the spectrum—rural, uneducated, married ones—may have problems that re-

ceive little public attention, precisely because their reproductive patterns are viewed as normal.

These observations underscore the fact that society exerts strong influences on the consequences of adolescent childbearing. In both the rural and the urban configurations we have examined, health outcomes are products of social forces: The problems associated with one model stem from pressures to begin marriage and childbearing early, whereas the deleterious outcomes of pregnancy to unmarried schoolgirls frequently stem from the risks they take to avoid detection and the sanctions that would follow. The unfortunate irony is that regardless of whether young mothers bear their children in rural areas or urban ones, they may receive inadequate health care: In rural areas few health care options exist; and in urban areas, though the availability of medical care is greater, the social condemnation they face often prevents them from seeking help.

Conclusions

If adolescent pregnancy and childbearing in sub-Saharan Africa draw increasing social concern, it is not because they are new: Teenage women in African societies have been bearing children for a very long time. In the past few decades, what has changed more than the proportion of adolescents giving birth is the social context in which adolescent fertility occurs, making it, in some instances, considerably more troublesome than in the past. Here, we briefly review the evidence on recent developments described in this report and place the findings into a wider perspective.

The data from the Demographic and Health Surveys (DHS) and other evidence presented in Chapter 2 reveal that overall, teenage childbearing in Africa has not increased recently in most DHS countries. Reported ages at first marriage are increasing in many countries. If, as is usually the case, unmarried teenagers are less sexually active than those who are married, sexual activity in the teenage population may actually be declining. Substantial changes in several domains, however, bear strongly on the circumstances in which adolescent fertility occurs, influencing not only its actual rates but also, most certainly, its consequences. At the beginning of adolescence, some very tentative evidence suggests, the age at menarche may be declining in some countries. At the other end of adolescence, in many countries factors that are socioeconomic in origin are delaying the time when reproduction occurs. The proportion of women who have had at least some secondary education has increased dramatically in some countries such as Botswana, Kenya, and Zimbabwe, and in many countries women

now find opportunities in urban employment. Moreover, although most women still report marrying before age 20, several countries have experienced noticeable increases in the age at marriage.

How do these changes affect childbearing? Increasing age at marriage, combined with constant or declining age at menarche, suggests that the gap between sexual maturity and socially approved reproduction is growing. To be sure, most teenage childbearing still occurs within marriage, and in many countries early marriage and childbearing remain commonplace, if not highly desired. Yet the eroding connection between marriage and childbearing appears to underlie most of the publicly expressed concerns about adolescent fertility. Together, these trends effectively lengthen the period during which problems that are social in origin may come to bear.

Probing further into changes in marriage, Chapter 3 shows that diverse conjugal practices explain some of the disjunction between marriage and childbearing. Further, because entry into marriage is usually less a clear-cut event than an inherently ambiguous process, the birth of a child may be an important step toward a union rather than a logical outcome of it. Changes in economic opportunities, law, religion, and education have introduced further ambiguity into what has long been recognized as a highly fluid status, and have fostered more consensual and "outside" unions. One woman may use these ambiguities to advantage, testing out new economic opportunities or using pregnancy to cement a desirable marriage. Another woman who becomes pregnant may find herself stalled in a remote holding pattern of the marital process by an urban man who must maintain a monogamous appearance. What is important for our purposes is that the way a union is viewed, whether with censure or celebration, usually determines how a pregnancy resulting from it is perceived.

Families continue to value fertility, but they try to ensure that it occurs within sanctioned states. Numerous ethnographic studies suggest that certain kinds of sexual expression by adolescents may have been more freely tolerated in the past than they are in Western societies; but sexuality was regulated closely by adults, who sought to maintain sharp boundaries between casual sex and reproduction among adolescents. Chapter 4 shows that in most African societies two other criteria are more important than marriage in establishing sanctioned contexts for childbearing: whether a man assumes paternal responsibility, and whether the young parents have prepared themselves for reproduction through undergoing a carefully structured series of rituals or periods of learning. "Premarital" pregnancy, therefore, is not necessarily unwanted or illegitimate.

Some evidence suggests that young men are beginning to place more intense sexual demands on their female peers. In the past, young men were said to be less likely to become fathers because they lived under the closer scrutiny of elders. Cultural ideals notwithstanding, it is quite likely that ill-

timed pregnancies occurred even in the past. But most could be covered up readily by marriage to eager suitors, either young men or older ones seeking additional wives. Nowadays, attendance at secondary schools in distant cities, adherence to new Christian doctrines that undercut practices allowing limited sexual expression, and the general erosion of elders' control may have given young men greater sexual access to adolescent girls. These trends may have undermined the historical tendency of men to accept the responsibility of paternity whether within or outside marriage. Furthermore, raising and educating children require more cash outlays than in the past. And young men themselves have new agendas that the responsibilities of fatherhood could obstruct. Since so many young men remain in school or trade apprenticeships for long periods, large segments of the young male cohort are not yet considered eligible for the responsibilities of marriage or fatherhood. As for older men, the social and economic pressures of new lifestyles make many men, especially those in urban areas, reluctant to legitimize their unions with loosely attached partners or to support the children these unions produce. In the end, the sexual demands of young men on women may have increased without a reduction in older men's access to young women.

Besides acknowledged paternity, the other criterion that marks sanctioned childbearing is preparation for adulthood. Chapter 5 turns to formal education, the most prestigious way of preparing for contemporary adult life. It shows that early fertility sharply curtails young women's chances of higher educational achievements, as indicated by rates of dropping out due to pregnancy. However, education also appears to delay fertility: It often induces young women who wish to obtain further training for adult life to prolong the period between menarche and childbearing. Education also acts more indirectly to make marital status more ambiguous: Young women at certain stages of the conjugal process who previously would have declared themselves to be married are now more ambivalent about doing so.

Although rising educational achievements are associated with rising premarital sex, we were not persuaded by widespread arguments that schooling or even the school context increases promiscuity by eroding societal mores. Desires to continue schooling effectively lengthen the gap between menarche and childbearing; but school policies of expelling girls for pregnancy are devised and enforced for the explicit purpose of discouraging early pregnancy. Indeed, many schools appear to be taking on roles that are surprisingly analogous to those of elders in the past, attempting to discourage reproduction among adolescents under their supervision who are deemed unprepared to take on adult responsibilities. Schools' strict policies may in fact deter many cases of early pregnancy.

But although formal education is the most visible and prestigious form of preparation for adulthood in contemporary Africa, it is only one of a

wide array of training possibilities. Chapter 6 asks whether some of these other forms of training affect fertility in ways that parallel the effects of formal schooling. Combining an unconventional array of evidence—macro-level data from the International Labour Office (ILO), data from the Demographic and Health Surveys, and ethnographic materials—it distinguishes four general economic types of countries in the subcontinent; it shows that the age at which women begin work and childbearing is related to the nature of economic opportunities or demands for women's labor in the wider economy. In countries where their labor is central to agriculture—the majority of sub-Saharan African countries—women make a very early start in the labor force and childbearing begins shortly thereafter. In economies where women's occupations are more varied, especially the West African trading economies, the need to prepare for complex commercial tasks and to create viable business relationships makes women delay both work and childbearing. In the industrially influenced economies of southern Africa, schooling tends to delay a woman's entry into the labor market, and long male absences for migratory labor make it difficult to create stable conjugal ties. Women tend to begin childbearing early, seeking perhaps to cement their relationships with the fathers. Finally, in the pastoral economies of the Sahel, few women at any age are recorded as participating in what either the ILO or male survey respondents regarded as the labor force. Yet if women's main "work" in this context can be interpreted as childbearing and rearing, it should not be surprising that women begin to bear children quite early in their lives.

Chapter 6 makes two other observations that reinforce the importance of context in determining fertility outcomes among adolescents. First, although young women themselves are the usual focus for adolescent fertility studies, the time they spend before taking up the responsibilities of marriage, work, and childbearing is ultimately a function of their adult sponsors' willingness to invest time and money in developing their economic potentials before their reproductive lives begin. Older adults are key actors in the scenario of adolescent fertility; their own options and needs exert strong influence on those of adolescents. Related to this observation is the fact that older women must themselves have economic niches for which younger women can train. In economies with marked divisions of labor by sex, it is the older women who train the younger ones in viable skills—or at least withhold them from the marriage market or delay their childbearing while they learn these skills.

Second, just as training for adult life can be an expensive, time-consuming proposition for young women, so it is for young men. Though they may have more sexual leeway than in the past, many young men have strong motivations to delay the responsibilities of parenthood that would endanger their economic career strategies or hamper more advantageous

conjugal matches in the future. In contrasting two Ijo communities in southern Nigeria, one a large urban area and the other a small town some distance from major amenities, Hollis and Leis (1989:122) make a vital observation that lends support to this contention:

[In the small village], the boys' parents have no objection to their sons' sexual exploits and usually welcome a child fathered by him as a member of the family [I]t is they who pay the circumcision fees and buy the appropriate gifts for the girl's circumcision, thereby affiliating the child to their patrilineage. In [the large town], boys see their futures as somewhat imperiled by having a child because they might have to drop out of school to earn money to help support the mother.

In western Nigeria, Berry (1985:156-157) makes a similar point by contrasting young male mechanics' apprentices with young men who are employed in factories:

Unlike the factory workers . . . , mechanics [apprentices] do not seem to have been pressured by their families to marry before they were self-employed. Clearly, they were not capable of supporting dependents until they were established, whereas factory workers were perceived by their kinsmen as receiving a steady income and therefore capable of supporting wives and children, regardless of their aspirations toward self-employment.

Although there is virtually no systematic research on this issue, cultural logic suggests that a child's status is determined as much by the father's potential tradeoffs in the realm of training and education as by those of the mother.

Chapter 7 attempts to assess the risks and consequences of adolescent fertility, concentrating on topics on which there is the most research: health risks. Elements of problematic childbearing fall into two broad types. The first occurs in societies in which marriage and childbearing are supposed to begin early, and thus in which most pregnancies lead to highly valued children. Such problems, as there are, stem primarily from the mother's physiological immaturity: Babies may suffer from low birthweights and birth traumas, and young women may not be mature enough to carry a fetus to term or to give birth. These problems are often compounded by the lack of health care that is adequate to cope with the potential problems of youthful childbearing. Such patterns of early marriage and childbearing arouse relatively little public concern, precisely because early fertility is viewed as normal or at least preferred.

The second cluster involves adolescent childbearing in unsanctioned circumstances. Young women in this group are often unemployed or still engaged in training or education. Few have gone far in the marriage process or have reliable conjugal partners. Insofar as these women are very young and physically immature, they face risks of childbearing similar to

those for women in the first pattern. In urban areas with better health care facilities, however, social condemnation for what is perceived as "inappropriate" pregnancy discourages young women from seeking the care that might forestall medical problems.

The children of very young mothers also suffer heightened risks of mortality and the major health risks of low birthweight. To be sure, in countries where marriage and childbearing begin early, the children of very young women have suffered disproportionate risks for some time. Nowadays, although improvements in medical care are in theory improving levels of mortality for children in many countries, access to medical facilities remains a problem for many children of young adolescents for the same reasons their mothers face.

Less well documented than health outcomes are the socioeconomic consequences of early childbearing for mothers and children. Childbearing in unsanctioned circumstances may erode the future social and economic well-being of children and foreclose their mothers' possibilities of continuing their education or training. Yet becoming pregnant is often a strategy for obtaining a husband, and most adolescent women in Africa undoubtedly find that the pressing need to find a suitable husband and begin a family far outweighs the costs to their education and career opportunities. It may even outweigh the health risks of early childbearing. Some schoolgirls, in other words, may believe they are better off by becoming pregnant and dropping out of school. The possibility that some girls become pregnant to be allowed to drop out is but one of many other pieces of circumstantial evidence that suggest that for many women, the social and economic consequences of *not* bearing children are immense.

In both socioeconomic contexts we have examined, the outcomes of adolescent fertility are products of social forces: The problems associated with one model stem from pressures to begin marriage and childbearing early; on the other end of the spectrum the deleterious outcomes associated with schoolgirl pregnancy stem from the risks young women often take to avoid the detection of their pregnancies and the sanctions that would follow. The unfortunate irony is that many young mothers lack access to medical care, whether they live in rural or urban areas. In rural areas, they are served by only a few, ill-equipped facilities; and in the cities, many avoid the more numerous and better-equipped facilities for fear of social condemnation.

FUTURE RESEARCH NEEDS

The social world influences reproduction even under normal circumstances, but situations in which society perceives that things have gone awry bring into sharp focus the strong influence of society on reproduction

in general. Because so many of these issues (legitimacy, preparation for parenthood, marital status, economic support for children, and so on) remain unexplored for Africa, policy advice on how to mitigate the deleterious effects of adolescent childbearing—or, equally important, build on the positive aspects—would be superficial. We offer instead a few brief thoughts on several areas that the findings presented here have highlighted as needing more research and analysis.

Health

Two central issues loomed large under the general topic of health. The first is the health consequences of bearing children at very young ages. Contexts in which early marriage and childbearing are condoned entail special unknowns. To what extent do people actually recognize the health risks of early childbearing and take measures to mitigate them? What factors appear to extend the gap between marriage and regular sexual relations? Under what conditions does this gap collapse? On the other side of the social spectrum is the second issue: abortion. Very little is known about the incidence of abortion in any African country. Do education and abortion covary? That is, do countries with increasing levels of education and ages at marriage also have high rates of abortion? Although schoolgirls are the most common targets of concern about abortion, can we identify any other categories of young women for whom pregnancy is also a problem? If so, do these other young women also seek abortions? If they do not, how do they try to improve their situations? Finally, to link the two issues, are improvements in maternal mortality through a rise in the age at first birth offset by an increase in the rate of abortion-related deaths?

Education and Training

Several issues in the domain of education and training require further study. One is relatively easy to solve: What proportions of women aged 15-19 are still in school in various countries? Although neither the Demographic and Health Surveys nor the World Fertility Surveys asked this very simple current-status question or the more complex one about when schooling ended, the data they generate can support analysis of current-status variables pertaining to adolescent fertility. Less easily resolved is the question of how much, compared with other factors, fertility contributes to women dropping out of school. That question has seldom been posed, and answers to it could offer a potentially vital qualification for theories that assume education to be the primary causal agent in the fertility/education relationship.

A second area of research concerns the effectiveness of family life

education. Many countries have begun to invest resources in developing such programs for secondary and (in some cases) primary schools, but how effective are these programs in persuading girls to delay fertility? How effective are they in dissuading young men from putting sexual pressure on young women?

Finally, we can now make only the barest speculations about fertility concomitants of training for small and informal businesses, especially for women. The idea that young women delay fertility to pursue nonschooling forms of training that prepare them for adult responsibilities is almost totally unexplored in the fertility literature; it requires considerable exploratory research. And while the topic is important now, it will likely become even more so in the future if, as King (1989-1990) has speculated, small businesses absorb increasing numbers of young people whom the formal sector cannot support. If small and informal businesses proliferate, and if young women delay fertility as they pursue business training, then we may see very little change in fertility levels, even if levels of formal education decline.

Marriage and Conjugal Relationships

Two kinds of issues related to marriage and conjugal relationships require more research. The first involves more accurate descriptions in different regions of the changing conditions under which sexuality and reproduction in general play out. When, for example, are sexual activity and reproduction supposed to be kept separate, and when should the one lead (or *not* lead) to the other? Is marriage necessarily the central criterion for combining the two? How does a pregnancy affect relations between the partners? Do sexual partners have the same interests in reproduction? Under what conditions is one partner anxious to proceed with a pregnancy and the other reluctant?

The second problem area involves the dynamics of polygyny, a highly distinctive feature that affects the conditions under which early childbearing occurs. More attention needs to be devoted to its varied manifestations and their concomitants in the life cycles of women and men, particularly during adolescence. The issue that our research has stressed concerns the effective marginalization of low-status women and children in certain kinds of unions in order to reduce the costs of reproduction. The requirements of life in new urban settings appear to be consolidating a class system based on access not simply to education and jobs but also to advantageous marriage. Worsening economic conditions may intensify the differentiation of the opportunities a family makes available to its members. As a result, those young women and their children who become defined as "outside" may enjoy less support from men.

Men

Up to now research has focused on young women when it examines adolescent fertility in circumstances the society regards as inappropriate. The lack of systematic knowledge about the reproductive lives of men—and adolescent men in particular—constitutes a serious gap in our knowledge. Which men claim the responsibilities of fatherhood for which children, and under what conditions? To what extent does having an acknowledging father matter for children's welfare, compared with being born within a sanctioned union? If men's training and education needs are as important as those of women in determining whether pregnancies will be welcomed, what are the fertility goals and behaviors of men in different socioeconomic situations?

Although all the DHS asked women a few background questions about their husbands, only four interviewed men and only one was not a subsample of the husbands of married female respondents. This strategy produced obvious biases. At one point in time, many older men are not married so they are ineligible as respondents. Moreover, few men marry before their twenties in Africa, so virtually no teenage men could have been interviewed, although indirect evidence suggests that many young men are sexually active.

SUMMARY

Adolescent fertility is affected by a wide range of rapidly changing factors acting through multiple, complex pathways we are only beginning to understand. Our investigation of the subject has drawn on studies of crucial areas of change in contemporary African life: education, health, social stratification, politics, employment, and the like. Our research indicates that few adolescents are helpless in the face of these new pressures and changes; they have a broad spectrum of strategies that they can call into play to gain room for maneuver. At the same time, strong evidence indicates that society has a powerful effect on the opportunities and responsibilities that determine when conjugal life and childbearing begin for adolescents as well as on how their pregnancies are received. Because society has such powers—whether expressed as diffuse values or as clear directives in discrete situations—adolescents exercise less control over their own reproduction than fertility surveys directed at women aged 15 and over typically assume.

Insomuch as the social world shapes the consequences of early pregnancy and motherhood, trying to treat age as an independent variable in assessing the overall outcomes of adolescent fertility is analytically risky. Whereas we might discern an increase in neonatal mortality among the

children of very young teens, a woman who married and became pregnant quite young may have had little choice in the matter. It is similarly difficult to separate the deleterious health outcomes that a young woman's physical immaturity might cause from health risks imposed by the social effects that arise from lack of paternal recognition or the risk of forsaking a school career. For regimes in which fertility is expected to begin very early, we know almost nothing about the consequences of *not* bearing children as an adolescent. We know equally little about what older schoolgirls lose by avoiding pregnancy.

An increase in adolescent fertility outside of marriage is only one of a number of emerging patterns among women. Others are a phenomenal rise in education and labor force participation outside the household. Childbearing outside marriage is increasing at the same time that women's opportunity costs are rising. In other words, many of the deleterious outcomes of fertility among urban schoolgirls arise in conjunction with increasing opportunities for young women. Where ages at marriage and levels of education are rising, and where fertility among adolescents as a whole may even be falling, these very rises in social aspirations foster resentment when opportunities are lost through pregnancies. Therefore, although modernity produces the wonders of formal schooling, contraceptive methods that can delay motherhood, and hospitals that treat emergency abortions and low-birthweight babies, it has equally sharpened public antipathy toward adolescent fertility. In these emerging contexts, adolescent fertility per se is changing less than the social context that judges it.

Appendix

Difficulties in Analyzing Adolescent Fertility

DEFINITION OF ADOLESCENT

Understanding why particular patterns of adolescent fertility emerge in Africa is no easy task. Most basic is the task of identifying our subject population: Who is an "adolescent"? What is a "youth," a "teen," or a "schoolgirl"? The studies we rely on are frequently inconsistent in their terminologies. And we ourselves are not perfectly consistent.

Studies of adolescents usually use a five-year age range, 15 to 19, as their primary source of data. The problem with restricting the analysis to this range--or even with including 15- and 19-year-olds in the same age group--is that the difference between old and young teens may be critical for the health of young women and their infants and for the kinds of options and repercussions they face. A 13-year-old who becomes pregnant may come from a family of white collar civil servants. She may have just reached puberty and may be contemplating secondary school. By contrast, an 18 year-old living a hundred miles away in a remote village may be married and carrying her second child. In locales where adult work and marriage begin early, a realistic analysis must include individuals as young as 12 or even 10. In sharp contrast are the areas, usually urban, where education ends late and childbearing begins late; here, an analysis that excludes 20- to 24-year olds misses considerable information.

Even within the same geographical area and the same social class, a young man and a young woman who are both described as adolescents may

actually be very different ages. In many areas, women from 15 to 19 are considered mature enough to be wives and parents; indeed, a childless woman of 18 may be making trips to the local healer, desperate to cure her infertility. Conversely, few African societies consider men of 15 to 19 mature enough for the responsibilities of married life or parenthood. A definition of adolescents as 15- to 19-year-olds thus includes many females who are considered "adults" and many males who are considered "children."

Because we need to draw a line somewhere, however, we use the term adolescent in a relative sense to define young people in the stage of life between childhood and adulthood, however their own societies define those terms for males and for females. We use the term adolescence flexibly, allowing it to stretch into the early twenties in areas where late secondary school completion is possible and where the average age at first marriage has increased. The term also at times includes children as young as 10, especially where labor force participation is at issue. By contrast, "teenagers" refers to a group defined in fixed chronological years—people aged 13 to 19—though in most cases the age group we use for quantitative analysis is 15 to 19. Otherwise, age groups are specified.

Besides the problems that we face in simply defining our population, analysis is difficult because adolescence is a very different experience for males and females, and the two life cycles, when subjected to new pressures, do not necessarily change in synchrony. Further, adolescence often encompasses several life transitions that occur at much the same time so that it is difficult to attribute causality to one event or another. For example, educational opportunities may induce young women to postpone marriage and fertility; but it is also true that low fertility facilitates education. Although cause and consequence may seem on the surface easier to untangle in the realm of health, analogous problems arise once we delve below the surface. Are the high risks of morbidity and mortality to be interpreted as "natural" consequences of the mother's physical immaturity, or do many of these risks stem from the condemnation that makes young women forgo prenatal care or attempt abortion?

DEFINITION OF MARRIAGE

The key transitions surrounding adolescence pose some of the most significant problems of definitional ambiguities. In Africa, many teens who report themselves as unmarried acknowledge sexual experience and childbirth. A major stumbling block to understanding this anomaly is the frequent difficulty in deciding whether a woman is married and, if so, when her marriage began. Two fundamental features of marriage in contemporary Africa demonstrate that the definitional issue runs deep.

First, marriage in many African societies is often a fluid process that

may be drawn out over months or even years. This processual nature of marriage creates immense difficulties for identifying a marriage and dating its inception and for establishing convincing causal connections between marriage and fertility. For most young women, sexual relations become more frequent after marriage begins, so that pregnancy becomes more likely. Yet if marriage is a process, pregnancy and childbirth may be formative events in creating a marriage: They may help legitimize a developing conjugal relationship. Hence, does an adolescent become pregnant because she is married, or is her marriage consolidated by her pregnancy? Second, not only is it unclear when a marriage begins, but also marriage can take many different forms, even within the same ethnic group. Partners and their families may contract a marriage within "customary" procedures, the church, Islamic law, civil statutory codes, or more than one of these. Furthermore, although formal polygyny appears to be diminishing in many urban areas, it is thriving in *de facto* forms, some of them new (Dinan, 1983; Mann, 1985; Karanja, 1987). A man who is technically monogamous may have "outside" wives, with whom he has informal unions. Which type of union is regarded as legitimate, and thus whether a woman is considered married, can vary with the context.

Taken together, these complications make it difficult to draw reliable inferences about the association between marital status and fertility. What they do suggest is that increases in premarital sexual experience and childbearing in such contexts stem not so much from changes in actual rates of childbearing, or even from increases in sexual experience during the adolescent years; rather, they stem from the possibility that young women in certain kinds of unions or stages in the conjugal process are now less inclined to claim that they are married. The consequences are no less real, however.

THE DATA: DEFINITIONS AND DEFICIENCIES

Although demographic patterns in Africa are drawing increasing attention, the task of investigating their causes and consequences has been hampered by problems of data. Time-series data are extremely thin in Africa, so that assessing change over long spans of time is quite difficult. For the demographic past in areas such as Europe and Japan, the extraordinarily rich quantitative and cultural record has allowed hypotheses to be tested far more systematically than has been possible for the African historical experience.

The situation has been improving rapidly, however. Nationally representative data on marriage and childbearing patterns in sub-Saharan Africa in the past two decades have come largely from the World Fertility Surveys (WFS) and their successors, the Demographic and Health Surveys (DHS). Together with national censuses, these surveys provide the most compre-

hensive cross-sectional demographic data on adolescent fertility in sub-Saharan Africa. At the time we write, we have in hand data from the DHS obtained between 1986 and 1990 from random household samples of women aged 15-49 for 11 sub-Saharan African countries: Botswana, Burundi, Ghana, Kenya, Liberia, Mali, Nigeria, Senegal, Togo, Uganda, and Zimbabwe. Four of these countries also participated in the WFS.

The sparsity of data on our specific topic poses one problem. Much of the material we use is gleaned from studies that did not focus on adolescents. The current round of DHS focuses on women of 15 to 49 years. Obviously, surveys must draw a line somewhere. But these lines omit a crucial slice of the group in whom we are interested: girls under age 15, many of whom, in some countries, are already married and have begun bearing children. Conversely, by viewing individuals 15 and older as mature "women," these surveys often fail to elicit information that is basic to adolescents' concerns—for example, whether they are still in school.

Besides lacking focused information on adolescents, we also face some gaps in knowledge about differences within specific populations in Africa. Such gaps develop because reliable data on almost any topic that has been critical to the interpretation of the demographic transition in Europe are historically shallow for Africa; they develop also because not all current national studies cover the key variables in the same way. Large-scale population data sets are not usually set up to support the kinds of points that small-scale ethnographic studies make best. In the DHS, ethnicity, religion, occupation, social class, and property endowment are covered in some studies and not others.

The same is true for data from the International Labour Office (ILO), upon which we draw. Because we use economic data on large populations, mainly up to 1980, and because the data on economic well-being are thin, we do not address poverty and destitution systematically. It is extremely difficult to find reliable economic or demographic information about refugee camps, homeland/reserve situations, guerilla camps, and urban streets, all of which obviously contain many youth.

The DHS, as valuable as it is, has other limitations. Concerning marriage, for example, some countries omitted questions about cohabitation or consensual union, whereas others included a separate category for them (van de Walle, 1993). Because the DHS is forced to categorize many of the phases of the marriage process into discrete units ("never married," "married," and so on), it loses much of the richness and diversity of the African marriage process. Another problem area in the DHS is education. In some countries, it is apparently assumed that women 15 and over are no longer in school; hence, there is no question in the DHS on whether young women are still enrolled, although clearly many are nowadays. Moreover, because the DHS was based on household samples, it likely missed women who

were in boarding schools at the time of the survey. Obviously no survey can anticipate all important issues or include questions on every demographically relevant aspect of a woman's life. With all its shortcomings, the DHS is far more comprehensive than other major sources, as well as more recent, and so we rely heavily on it.

INTEGRATION OF DATA SOURCES

Because the sources on which we depend vary widely in coverage of topics about adolescence and fertility, we face the task of integrating a number of different types of data: national-level data for female labor force participation from International Labour Office materials, regional and national data on fertility from the Demographic and Health Surveys, data on religion or social class, and information on cultural and social practices based largely on individual ethnographic studies of ethnic or subethnic groups. Especially because of problems with the availability and coverage of data, interpreting demographic dynamics for Africa demands the use of methods besides quantitative inference; for example, logical inference from known social patterns and from history.

The need to integrate such vastly different sources of data creates several problems. One derives from the enormous variation in the sizes of national populations. Although national and regional data have great strengths, they can also be misleading when we make comparisons as if, say, Botswana, with a population of 1.2 million people dominated by a single ethnic group, were equivalent to Nigeria, with a population of 89 million people and 250 different languages. Each of the three major ethnic groups in Nigeria is at least six times as large as Botswana's entire population. Although the experience of small countries highlights important processes, one should not necessarily accord them equal analytical weight.

A second problem in trying to integrate data sets is that they almost invariably use different units of study. How, then, do we categorize indigenous variables or even social groups in order to draw reliable quantitative inferences about demographic regimes in Africa? There are two major contesting visions. One of the founders of African studies in America, Melville Herskovits, attempted to divide the continent into several vast "culture areas" that were linked by culture, history, and livelihood (Herskovits, 1930). Beginning in the 1950s, classifications were based on more narrowly defined criteria, often without reference to historical and geographical connections among peoples. The practice of designating ethnic groups within defined national boundaries—"the Yoruba of Nigeria," "the Akan of Ghana"—grew largely out of the administrative needs of colonial governments and continues to reflect political pressures. The Human Relations Area Files and the subset of societies chosen to form the *Ethnographic*

Atlas (Murdock, 1967), which together make up the largest coded body of ethnographic information, are based on such classifications.

Many of the demographic data have been collected not by the cultural area or the ethnicity framework, but with reference to political boundaries of nations and their constituent administrative units that colonial states defined. Only for some DHS countries, for example, can one isolate specifically ethnic categories of the population, because this variable was coded or because there is a close match between the ethnic and the administrative boundaries. As a result, hypotheses about the influence of indigenous property-control variables cannot be reliably addressed in quantitative terms at all.

One of the most difficult problems we encounter in compiling sources is ambiguous or varying definitions. Our reservations about the term adolescence have been spelled out already. Other puzzles focus on terms that seem clear at first, yet become obscure upon reflection. What, for example, is meant by "sexual activity"? Besides intercourse that may lead to pregnancy, this phrase can refer to nonpenetrative and nonreproductive means of sexual expression, including those within marriage to a young bride with whom full sexual relations may not be consummated immediately. Another term that poses problems for this report is "work," a subject for which a principal source of data is the International Labour Office. The ILO definition of employment clearly presents problems for Africa. Over the past decade, the basis for defining the labor force has shifted from those considered to be "economically active" (that is, usually employed) to those "currently active" (employed during a specified period). As the ILO itself acknowledges, "The results may be significantly different, depending on the approach taken, for male youths and elderly males and women of all ages" (International Labour Office, 1990:5).

Finally, any attempt to use multiple sources of data in interpreting the dynamics of persistence and change over long periods quickly runs up against problems of historical specificity. At this time, the greatest richness and precision in the ethnographic sources tend to be found in studies conducted up to the mid-1980s, before the DHS studies, because of the time it takes to collect, digest, compose, and publish contextual material. For the demographic data, the greatest confidence can be placed in the most recent data, but published ethnographic material that would illuminate these most recent changes is still sparse.

DATING OF CHANGE

Related to the problem of accuracy of the historical record is the problem of assigning dates to trends. Any statements that we can make with confidence about trends in the statistics per se cannot date back more than

30 to 40 years. Almost no quantitative material on adolescent fertility patterns predates 1960; for labor force participation, there is almost nothing before 1950. Many of the current trends, however, were set in motion long before. In trying to use ethnographic information to trace trends, on the other hand, we confront the old analytical problem of the "ethnographic present." The ethnographic literature on Africa often implies, through an enduring present tense, that certain practices, often referred to as "traditional," have existed unchanged for centuries, an implication that may not be true in every case. The term "modern" presents the opposite problem: It is often applied freely to patterns that are assumed to reflect the effects of wage labor, export crop production, conversion to world religions, and the spread of formal education, yet may in fact have their origin in the unfolding of trends that predated the introduction of these factors.

Although these problems are to some extent irresolvable, we define our terms as carefully as possible. When we refer to traditional or "indigenous," we refer to practices that appear repeatedly in the ethnographic literature that appeared before the twentieth century. In most cases we specify the time period as precisely as the sources allow. Chapter 2 refers to the past 30 years or so. Chapter 4, on the social context, refers to values and processes we call indigenous to Africa—those that developed most coherently under precolonial conditions but continued to be relevant well into the twentieth century. The chapters on marriage (Chapter 3), education (Chapter 5), and training (Chapter 6) use quantitative data from 1950 to 1990. However, they are interpreted through recourse to studies extending further back in time in the search for appropriate qualitative material to complement the shorter-run quantitative data.

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