

# The Social Impact of AIDS in Sub-Saharan Africa

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THE AIDS CRISIS HAS ERUPTED IN AFRICA AT THE very time when everything seems to conspire to bring bad news: drought, famines, and civil wars, and the huge refugee streams caused by their conjunction; the economic crisis and soaring public debts and the insistent intrusion of foreign advisers in such areas as structural adjustment, agricultural reform, and population control. The AIDS emergency compounds a sense of loss of control in the face of crises which, however real they are, had not been identified locally until diagnosed by foreigners: the energy shortage, the population explosion, and now, the HIV plague.

Perhaps the most disheartening realization is that the heady progress made in the area of public health is suddenly in question. In a time of optimism, the Brandt (1980, 82-83) report had insisted on the importance of health in nation building:

Health is a unique challenge, because it is a collective public function where improvement is soon noticeable. Reducing parasitic diseases demonstrates that there is no inevitability about people's lot; that human beings *can alter* their own environment and their prospects for the future. As the poor begin to realize their own capacities for directing their lives, they become more open to innovation and change. Reduced morbidity from malaria and river-blindness has already in the past encouraged farmers who have previously been de-

bilitated to accept new farming techniques. Improving the health of infants also builds a promising start to human development.

With HIV, even the greatest achievement of post-independence African societies—the unprecedented pace of decline of mortality—is denied. Infectious diseases may not be conquerable after all. Urban living, which promised enlightenment and freedom from the restrictions of traditional life, is suddenly a situation rife with dangers and prohibitions. Sexual freedom is, literally, a poisoned gift. For women, the cities have occupied an important place in the search for liberation from male dominance and acquisition of financial independence. Even the gains of female education may be in jeopardy, as parents seek to preserve their daughters and push them back to the security of early and arranged matrimony with a reliable partner.

The facts about AIDS in sub-Saharan Africa are not well known. We refer the reader to the growing literature (e.g, Fleming 1988; Mann et al. 1988; Piot and Caraël 1988). The HIV infection in sub-Saharan Africa (and in some other parts of the developing world, such as parts of the Caribbean and South America) presents original features, which make it epidemiologically very different from HIV in the United States and Europe, the so-called “pattern 1” countries, where HIV infection is still found mainly among male homosexuals and IV drug users. The following traits of HIV infection are characteristic of the distinctive forms taken by the epidemic in “pattern 2” countries, i.e., in such countries as Congo, Rwanda, Tanzania, Uganda, Zaire, or Zambia:

1. HIV appears to be mostly diffused through heterosexual intercourse, and to be equally widespread among males and females. The age distribution of the disease (the most affected age groups are 30 to 40 years for males, and 20 to 30 for females) reflects the different age patterns of sexual intercourse among men and women, and, perhaps, the particular vulnerability of the immune system of pregnant women. Male to female transmission appears to be more efficient than female to male transmission.

2. AIDS is also a disease of children to a larger extent than in developed countries. This is due to the high fertility of HIV-positive mothers, the shorter latency period for small children, and the infection of pregnant women and children in hospitals through transfusion of contaminated blood.

3. AIDS in Africa is reputed to be a disease of the elites. It is certainly still a disease of the cities, where the sexual modes of transmission have been specially efficient in diffusing the infection. Because wealthy men have more extramarital sexual partners and draw more attention than the poor, it has caused great concern among the rich.

4. Prostitution and other patterns of institutionalized extramarital sex have played a special role in the transmission of the disease.

5. The most widely identified clinical symptoms of AIDS involve weight loss due to loss of resistance to diseases of the gastro-intestinal tract. This has earned it the name of "slim" in eastern African countries.

Because of the differences in patterning already inexorably established—i.e., despite the common etiology, modes of transmission, and range of symptoms—it is difficult to employ the same control measures for Western and African countries. The "groups" identified as at highest risk, and the specific behaviors implicated within them, are manifestly different in their significance between the two pattern areas. Several points of actual and potential commonality between pattern 1 and pattern 2 areas are worth noting, however:

- The "saturation" point, beyond which further spread of infection will halt, is not known, and in the absence of deliberate interdiction in the implicated behaviors, the epidemic will continue to spread.
- Infection rates are highest in cities, most importantly because of the nature and frequency of contacts between individuals.
- Uninfected sexual partners of infected individuals are at great risk.
- Vertical transmission is a serious route of infection, and its extent and rates are related in part to rates of fertility.

The prevalence and incidence of AIDS is vastly underreported in Africa. The estimates used by the World Health Organization (WHO) are not based on actual diagnoses, but on informed guesses: a minimum of one million persons infected in Africa, but perhaps as many as 2 or 3 million, as of 1987 (Bongaarts 1988); the cumulative number of AIDS cases by mid-1988 is estimated at more than 100,000, although less than 20,000 had officially been reported to WHO by the end of 1988 (Mann et al. 1988, 85). The underreporting and consequent low

estimates were initially used to support national arguments that: the disease is actually negligible compared with other killers (such as malaria or measles); there is a racist conspiracy in the Western media to discredit Africa; the control efforts of international agencies is a ploy to introduce condoms and other forms of contraception.

Here is yet another point of commonality with pattern 1 countries within which there is a deeply rooted—almost culturally universal—initial “denial” followed by presumptions of an “us” being victimized by a foreign “them.”

## Geographical Distribution

What is known about the geographical distribution and the prevalence of HIV is based on very scanty evidence, mostly urban in origin, pieced together from unrepresentative data. For example, statistics on the rate of infection of prostitutes have occupied a very important place, as an index of both HIV diffusion from country to country, and of infection rates within a country.

The maps of HIV prevalence have many blank spots, but the evidence suggests that some eastern and central African cities are now (and have been for the past five years) undergoing an epidemic which is very widespread in the population, and is growing very rapidly. WHO's estimate of the prevalence of HIV in Kigali or Kampala is between 20 and 30 percent of the adult population. This is very high for a disease that has only been identified in 1981, and that has invariably, as far as we can tell, a fatal prognosis.

The present geographical distribution of AIDS in Africa appears to correspond not so much to the geographical distribution of risk factors as to strong random effects of the time and place of onset of the epidemic. This is a normal feature of an epidemic in its early stages, and it is likely that the disease has a long way to go before it reaches a sort of equilibrium, the endemic stage. There are epidemiological factors, both social and biological, that were necessary for the spread of the disease, but it is important to stress that the sufficient condition was the presence of the virus; and very little is known why it existed at a certain place at a certain moment, and not elsewhere. The explanations that rely on an African origin of AIDS have no evidence to support them. Whether it was indigenous to parts of Africa, or imported by travelers,

the virus was there fairly early in some African countries; its presence has been identified in blood samples stored as early as 1959 in Zaire. AIDS in Africa may appear so unique only because it has reached a more advanced stage than elsewhere in the world. Africa would be a precursor, and the example should contain lessons for all countries whose inhabitants might transmit the disease in similar ways.

## Factors of Risk

Social and behavioral factors of risk are present in all societies before the existence of the virus. They provide the matrix to be filled when HIV appears. The virulence and speed of the African AIDS epidemic raise questions as to the circumstances that help the transmission along once the HIV virus is introduced. Are Africans more sexually mobile than the denizens of other continents? Is the number of sexual partners higher than elsewhere? We have no reliable data on the subject. The World Fertility Survey (WFS), a vast international enterprise, has collected comparable data on reproduction in some 40 developing countries between 1974 and 1984 (Cleland and Hobcraft, 1985). But, because the design of the survey antedates any realization of the existence of AIDS, the WFS did not emphasize questions on sexual mobility or marital behavior. The available evidence is presented in table 1, and suggests great variety of sexual behavior among sub-Saharan African countries. It also reveals no relation between identifiable factors of risk and the known distribution of HIV. Kenya, which is in the central African belt of high HIV prevalence, does not exhibit evidence of a higher number of sexual partners per woman than Cameroon or Ivory Coast, where only very few AIDS cases have been reported. Table 2 presents a number of comparable indices for a small number of developing countries from other continents. Definitions of nuptiality vary widely from one country to another, making comparisons difficult. In Haiti, for example, all free or consensual unions have been reported as marriage, whereas in Jordan, premarital sexuality is so culturally proscribed that the survey did not attempt to measure it. Although African countries appear to have more extramarital sexual activity reported in the World Fertility Survey, and less condom use, they are roughly comparable on the number of previous marriages; they have generally a younger age at female marriage, which results in fewer sin-

TABLE 1  
Selected Indices of Sexual Behavior, World Fertility Survey,  
African Countries

	Cameroon	Ghana	Nigeria	Senegal	Ivory Coast	Kenya	Benin
<i>Ever-married women</i>							
Mean number of unions per woman	1.18	1.23	1.13	1.32	1.24	1.09	1.19
% with birth before marriage	22.5%	8.6%	13.6%	4.5%	18.7%	21.8%	16.6%
% ever used condoms	2.0	4.1	0.6	0.2	1.0	2.8	1.0
<i>Single women</i>							
% of all women	13.8	19.3	15.8	12.9	13.4	23.0	11.0
% parous	22.1	5.6	3.3	8.8	30.9	20.2	5.2
% having sexual relations	38.8	-	-	-	-	-	-
% pregnant	2.7	1.0	0.6	1.2	4.9	3.0	1.1
% ever used condoms	2.3	4.1	7.5	0.4	3.4	3.0	1.7
<i>Widows and divorced</i>							
% of ever-married	10.1	10.3	4.6	5.0	7.0	9.0	3.6
% having sexual relations	39.2	-	-	-	-	-	-
% pregnant	3.6	1.2	4.2	2.9	2.6	5.3	2.4
% ever used condoms	2.6	4.1	0.0	0.0	0.6	3.2	0.0

gle women in the population. It is hard to draw firm conclusions on this evidence alone.

Our strategy in this section is to investigate the "fertile ground" of the epidemic, the matrix of risk factors into which the infection is making its way. Two sets of factors that could be favorable to HIV transmission can be singled out as particularly typical of sub-Saharan Africa and its traditions in the area of marital life. First, in many parts of the continent there has been a traditional pattern of long female sexual abstinence after a birth (Page and Lesthaeghe 1981). Among the Yoruba of Nigeria, for example, John and Pat Caldwell (1977, 202) reported

TABLE 2  
Selected Indices of Sexual Behavior, World Fertility Survey,  
Non-African Countries

	Bangladesh	Columbia	Haiti	Jordan	Morocco
<i>Ever-married women</i>					
Mean number of unions per woman	1.10	1.17	2.17	1.04	1.18
% with birth before marriage	—	9.6	0.1	—	3.9
% ever used condoms	4.8	8.0	5.0	8.8	2.3
<i>Single women</i>					
% of all women	—	38.6	30.8	—	30.1
<i>Widows and divorced</i>					
% of ever-married	11.4	14.4	3.0	4.3	10.4

that the period of postpartum taboo extended for almost three years, and they commented:

As at any given time a majority of married men have only one wife and a majority of these wives are abstaining, it is clear why Lagos, Ibadan and other large towns can support so many night clubs, bars and brothels (where the women are frequently widows or deserted wives).

The World Fertility Survey has confirmed the widespread survival of customary abstinence in many parts of the continent. The taboo is linked with child spacing and breast feeding, and it is generally accompanied by tolerance toward marital infidelity on the husband's part.

The second element worth noting in sub-Saharan Africa is an exceptionally large difference in the age at first marriage of men and women. According to a review of census and survey data by the United Nations (1988) the average difference was 6.3 years in Africa (including northern Africa) and 8.4 years in western Africa, an area that includes the countries between Senegal and Cameroon; the average difference in Asia was 4 years, and in Latin America, it was 3.7 years. A nuptiality system that tolerates such large age differences between the spouses

necessarily has two related characteristics: First, there is a surplus of women at the marriageable ages, which in this instance is absorbed by polygyny, the practice of having more than one wife at a time, a common feature of African nuptiality. (In other systems of nuptiality that tolerate large age differences, there could be either a large proportion of single women, or widespread nonremarriage of widows; in Africa, however, marriage is quasi-universal for both sexes, and institutions such as widow inheritance insure that most women in the childbearing ages are in the married state.) And, as a second consequence, there is a large surplus of young nonmarried males.

Polygyny is in itself compatible with low sexual mobility, and in principle it will reduce the frequency of extramarital sex by men who must abstain from sexual relations with one wife during the postpartum period. In practice, however, polygyny often goes together with the easy remarriages of widows and divorced women, and it tends to multiply the number of sexual partners over a woman's lifetime. The age difference from the husband increases with the wife's rank; among the Sereer of Senegal, for example, the age difference was 10.6 years for first wives, 15.9 years for second wives, and 18.3 years for wives of higher rank (Garenne and van de Walle 1989).

Men before marriage are usually not expected to remain chaste; in many parts of Africa, the average time between first sexual intercourse and marriage may be of the order of 5 to 10 years. (In a sample of male urban adults in Kigali, Rwanda, "the age at first marriage was 27.9, while their age at first sexual intercourse was 18.9 years. The mean number of sexual contacts with prostitutes was 9.0 for wage-earners and 7.6 for blood donors" [Caraël et al. 1988a, 346].) Large differences in age at marriage go together with institutional arrangements that facilitate, or attitudes that tolerate, sexual contact with available women either within the kinship group or outside. It should be noted that male homosexual encounters are not sanctioned in sub-Saharan African cultures; hence, no data on actual experiences exist.

These two traditional patterns of behavior—the postpartum taboo and the age gap between spouses—make for a possibility of infection of married women through their husbands who have contracted a sexually transmitted disease out of wedlock, either pre- or extra-maritally. The simple model that we postulate, then, is one where a majority of young women marry much older men who have had previous sexual experiences with sexually mobile partners, through whom they were in-



fected. Alternatively, a married man whose wife was abstaining during pregnancy or after a birth, may contract HIV from extramarital partners, and subsequently infect his wife. What little survey evidence there is suggests that such mechanisms of infection are actually operating. Caraël et al. (1988b, 205) conclude a study of 150 heterosexual couples in Rwanda thus: "An important finding of this study is that in Rwandese couples, the major risk factor for HIV in wives and their children is the pre- and extra-marital sexual activity of their husbands."

Such mechanisms thus facilitate the spread of HIV infection from the world of commercial sex and informal liaisons into the world of married people. Single men are also at high risk. Young men in search of money to set up an independent household and accumulate a bride wealth often go through a stage of temporary labor migration to urban areas, locally or abroad, where they constitute a market for prostitutes; the infection can thus move from the city to the countryside, and from country to country.

## Forms of Commercial Sex

There are many opportunities for informal or commercial sex, particularly in cities. The boundaries of prostitution are ill defined, and commercial sex takes many different forms, from the "karuas" of Accra who provide food and lodging for migrant workers, and from bar girls, to high-class courtesans, and "outside wives." (See Little 1973, for an attempt to unravel the complexity of urban sexuality, and the author's distinctions between "walk-about women," "good-time girls," "tutu prostitutes," "Jagwa Nanas," *femmes libres*, *deuxième bureau*, etc.) Kenneth Little (1973, 84) proposes "to confine the term 'prostitute' to women whose livelihood over a period of time depends wholly on the sale of sexual services and whose relationship with customers does not extend beyond the sexual act." He notes that prostitution is not usually the most favored form of sexual relationship outside of marriage:

On the contrary, while prostitutes are patronized mainly by migrants and other temporary visitors, there is also a wide variety of additional arrangements of an extra-marital kind which are, for the most

part, a normal feature of town life. These contacts . . . often bring monetary and other material advantages to the women concerned but they involve a more personal kind of relationship and, on the whole, are not regarded as derogatory by society in general (Little 1973, 101).

With the economic crisis and the narrowing of opportunities for women in the labor market, the sale of sexual services is often the only resource left to many women in cities. In addition, there are many situations where young women negotiate advantages from their teachers in school or their supervisors on the job. To pay for their education, or to maintain a desirable standard of living in the city, young women often find a rich “sugar daddy.”

In addition to various sorts of commercial sex, there are also a range of opportunities for sexual mobility or multipartner relations. In order to maximize their chances of marrying, women often have to maintain relationships with several partners, sometimes at the same time, and proven fertility is an important bargaining tool to secure the stable attachment of a man. This “conjugal testing” is facilitated by the relative tolerance of premarital fertility, and by the institutional and legal arrangements that facilitate the integration of children in either the father’s or the mother’s lineage.

Despite the pervasiveness of premarital and extramarital relations, most African societies retain a profound ambivalence about the subject. Men’s control of in-group women was an important feature of traditional societies. The accounts of anthropologists suggest that traditionally, virginity before marriage was important over much of the continent. African cities provided an escape mechanism for an increasing number of women. Christine Obbo (1981, 87) has noted the conflict in urban Uganda:

The labelling of all urban women as prostitutes reveals a double standard on the part of men who both want to control their women—wives, sisters and daughters—and still have relations with mistresses, concubines and prostitutes, thus contradicting as lovers what they strive to achieve as husbands and parents. The diffusion of the urban notion of *malaya* [prostitute] into the rural areas further shows fixed male views which cannot cope with non-traditional roles for women.

Societal controls have different degrees of effectiveness in different locales. AIDS is heightening the cultural discrepancies between the behavior of particular peoples in rural and urban areas, and its diffusion is upsetting the growing economic and social advantage of the city over rural areas.

Paradoxically, societies that stress female virginity at marriage—and where the group vigorously protects the honor of its women but tolerates prostitution (often with foreign women, who provide a bridge for infection across borders)—may run a higher risk of STD epidemics than societies that are more broadly permissive about sexual affairs, and where both women and men have several partners during their lifetime. A situation where one woman has intercourse with 500 men over a year transmits the disease more efficiently than one where 100 women each have intercourse with 5 men. This may explain for example why Kigali, the capital of Rwanda, which is not permissive toward the sexuality of young Rwandese women, has high rates of HIV seropositivity, whereas Kinshasa, which is known for its bars, its night life, and its free women, has lower levels of infection (Caraël et al. 1988a).

Although high sexual mobility is a social factor favorable to HIV transmission, in itself it does not explain why HIV is spreading heterosexually in a way that is so glaringly dissimilar to the pattern established in the developed world. Special “African” explanations must also invoke biological or physiological mechanisms. The best explanatory hypothesis appears to be the prevalence of other sexually transmittable disease in the population, themselves also a result of sexual mobility combined with the consequences of poverty, absence of preventive medicine, and general bad health. In addition, blood transfusions to treat anemia in the obstetrical and gynecological services of hospitals appear to account for a substantial proportion of HIV infections among young urban women.

## Estimates of Future Trends

The principle of population projections relies on the slow and essentially predictable change of the demographic parameters of fertility and mortality. Perhaps understandably, the official projections published

by the United Nations, the World Bank, or the U.S. Census Bureau have not accounted for the overall or differential impact of AIDS by social groups or cultural zones.

The projection models that incorporate AIDS adopt largely arbitrary laws of expansion of the HIV infection. Because of the extreme dearth of information, it is not surprising that the existing projections have led to different conclusions. Some projections foresee an absolute decline of African populations within the near future; for example, for Brouard and Dackam (1988) who assume a steady law of expansion of the epidemic, expectation of life at birth could decline from 52 to 24 years, and the African population could start to decline by the years 2020 to 2030. Anderson, May, and McLean (1988) also project a declining population. On the other side, Bongaarts (1988) postulates an upper limit of HIV prevalence (the peak being reached 25 years after the beginning of the epidemic) between 20 and 30 percent in the adult population of the continent; under these circumstances, the population of sub-Saharan Africa would continue to grow, although at a somewhat reduced rate. (More recently, Bongaarts and Way [1989] have projected the population of Africa under two extreme sets of assumptions, a "low" level of HIV seroprevalence of 2.7 percent of adults, and a "high" level of 21 percent. The AIDS death rate under these assumptions would vary between 1.5 and 12 deaths per 1,000 population.) These numbers must be compared with the highest prevalence rates attained at this date in the most affected country—Uganda, where it may reach close to 10 percent of the adult population—and the most affected cities—e.g., Kigali, where it may reach close to 30 percent.

There is little ground to predict any particular overall level reached by the epidemic in the near future. We know, however, that the diffusion of the disease has been extremely rapid in the 1980s, and is continuing almost unabated. Because of the long incubation period of AIDS, individual foresight will only bear its fruits in the future. Official denial of the importance of the epidemic, and public resistance to unwelcome news, contribute to facilitate the progression of the disease.

Any estimates of the future course of the epidemic seem to depend on the projector's sense of what is likely to happen; the following is a conservative assessment. For sub-Saharan Africa as a whole, the progression of HIV to an average prevalence between 5 and 10 percent among adults does not appear impossible within the next 25 years.

These average figures have little meaning, however, since some regions would probably remain relatively untouched, while others would be devastated. Urban areas would be particularly affected.

What would be the implications on mortality and population growth for sub-Saharan Africa? We projected a population possessing the characteristics of eastern Africa, assuming a linear growth of HIV prevalence (i.e., the proportion of HIV seropositive persons in the population) from zero in 1980 to 7 percent in 2010; the latter corresponds roughly to an incidence (i.e., new sero-conversions per year as a proportion of the population) of 1 percent. We assumed that one-half of those infected would die in the ten years following their infection, and that mortality would continue at the same pace until all died; 30 percent of children of HIV positive mothers would be infected in the womb and their mortality in the first year of life would be about twice that of the noninfected.

One problematic part of the projections involves the assumptions made about the background levels of mortality and fertility in the noninfected population of sub-Saharan Africa. Is it realistic to assume, as most official projections do, that the course of mortality decline will continue unabated, while the fertility transition starts and picks up speed? Much depends on the overload of health systems by the AIDS emergency, and on the future viability of the primary health care policies advocated by the World Health Organization, which have given priority to preventive child care, immunization, oral rehydration, and family planning in rural areas. In countries which spend only a few dollars per person per year on health, the cost of screening the blood supply for HIV alone will strain the national budget; if important national and international resources are diverted toward the special urban emergency, including the care of AIDS victims in large hospitals, already depleted health budgets might well falter entirely. The level of mortality may also increase because AIDS may actually activate other epidemics such as tuberculosis. We have made one projection where we assumed a complete stagnation of the background mortality level—i.e., we kept it at the level attained in 1980.

The projections are presented in table 3. They suggest that despite an enormous growth in the number of deaths as a result of AIDS, the population of Africa would continue to grow. Under the worst-case scenario (HIV incidence of 1 percent and stagnation of background mor-

TABLE 3  
Projections under Various Assumptions concerning Mortality and AIDS

	U.N. assumptions	U.N. + 1% HIV incidence	Stagnation + 1% HIV incidence
<b>1980</b>			
Population	100,000	100,000	100,000
Total Fertility*	6.82	6.82	6.82
Female ${}_0e_0^*$	48.9	48.9	48.9
Crude birth rate	50.	50.	50.
Crude death rate	21	21.	21.
Natural increase	2.9%	2.6%	2.9%
HIV incidence	0%	0. %	0. %
HIV prevalence	0%	0. %	0. %
AIDS death rate	0.	0.	0.
<b>2010</b>			
Population	249,042	229,534	183,019
Total Fertility <sup>+</sup>	5.58	5.58	5.58
Female ${}_0e_0^+$	59.1	59.1	48.9
Crude birth rate	42.3	42.0	43.1
Crude death rate	12.7	18.3	24.4
Natural increase	2.96%	2.37%	1.87%
HIV incidence	0%	1%	1%
HIV prevalence	0%	6.92%	7.91%
AIDS death rate	0	6.2	5.8

Source: United Nations 1986.

Notes:  ${}_0e_0$  is expectation of life at birth, exclusive of AIDS deaths.

\* 1980-1985

+ 2005-2010

tality), the growth rate of the population would be reduced from the 3 percent of the United Nations (1986) projection that assumes no AIDS, to 1.9 percent per year. The crude death rate would be roughly twice the level of the United Nations projections. In a sub-Saharan Africa of 877 million people in 2010, there would be 79 million people infected, and five million AIDS deaths a year.

Our picture of the demography of sub-Saharan Africa in 2010 is based on very inadequate knowledge for the present, and on even more uncertain extrapolations into the future. Projections are no more than

tools. They provide an order of magnitude of problems that public policy must address. In the next two sections, we examine some of the societal reactions that can be expected in the face of AIDS.

## Obstacles to the Control of AIDS

In the early 1980s, the first reaction of governments, public opinion leaders, and intellectuals to the appearance of AIDS in sub-Saharan Africa was one of denial. There was a reluctance to accept the seriousness of the epidemic; the size of the threat was judged to be exaggerated in absolute terms, or overplayed in comparison with other common diseases. The psychological wounds caused by the epidemic are difficult to grasp from the outside; it was often interpreted as the latest form of neocolonialism, a nail in the coffin where the outside world wanted to bury Africa. The resentment was aggravated by the impression that outsiders blamed on Africa the origins of a "white man's disease" that seemed initially limited to homosexuals and drug addicts. The very international and bilateral agencies that labor hard to provoke public consciousness are, as in Cassandra's story, blamed for the diffusion of the infection. On the part of the public too, there was a great deal of skepticism on the reality of the epidemic and on the urgency of a change in behavior. One popular interpretation of the French initials of the disease, SIDA, was "syndrome imaginaire pour décourager les amoureux" (imaginary syndrome to dissuade lovers).

There is some foundation to the argument that there are other diseases that contribute more to overall mortality than AIDS, and that they are being neglected in the singular focus on the new disease. But even if malaria or childhood diseases today kill more people than AIDS, the latter is a new problem which comes in addition to the diseases that already existed, and it has the potential to grow until it occupies first place, and pushes the concern about other diseases in the background. Projections suggest that AIDS could account for almost one-fourth of all deaths by 2010, and that its direct and indirect effects could double the crude death rate. Moreover, whereas other diseases tend overwhelmingly to attack young children before their parents have time to invest heavily in them, AIDS kills a large number of young

adults in the productive years, and taxes the urban elites severely. Certain socially and economically important groups such as the military or mining personnel may have been specially affected. The economic cost of AIDS is reputed to be heavy, although estimates are speculative.

## Public Perceptions

The phase of official denial is largely over in most of sub-Saharan Africa. Under insistent prodding from international organizations, public health authorities are now attempting to confront the crisis, and every country in sub-Saharan Africa has at least a nominal plan for combating the disease. The media have taken up the subject in the form of education campaigns or in broadcasts and columns reflecting popular perceptions and worries. Yet, a substantial part of the population of many sub-Saharan countries have never heard of AIDS, and, as in other countries, those who have heard of the disease hold many misconceptions. Table 4 gives some results from Gallup surveys taken in a national sample of Nigeria and in Libreville, the main city of Gabon (few cases of HIV infection have been reported for Nigeria, and in Libreville, the epidemic by all accounts has not reached the seriousness of other neighboring capitals such as Brazzaville or Kinshasa), and compares them with responses to the same questions in the United States (*Gallup Report* no. 3, 1988). The surveys reflect the different characteristics of the epidemic in pattern 1 and pattern 2 countries (e.g., the higher weight on blood transfusion, and the lower weight on homosexual and intravenous drug transmission), but the quality of knowledge does not seem to be much worse than in the United States. Other polls and surveys have confirmed the Gallup findings for other countries. The attribution of AIDS to witchcraft, and the belief that traditional healers can cure AIDS, are certainly more common in sub-Saharan Africa than in western nations.

A common misconception is that healthy looking sexual partners cannot transmit the disease. Men claim they choose their partners more carefully, but caution may be limited to the avoidance of "slim women." There is little understanding of the long incubation period of HIV and the possibility of infection during the asymptomatic phase of the disease.



TABLE 4  
 Percentage of Respondents Responding Positively in Gallup  
 Survey to Selected Questions about AIDS, in the U.S.,  
 Nigeria, and the Main City of Gabon

	U.S.A.	Nigeria	Gabon
Have heard or read about the disease known as AIDS	99%	46%	90%
AIDS perceived most urgent health problem	68	10	45
Likelihood of AIDS developing into epidemic for			
- the population at large	51	50	43
- people who need transfusion	59	75	77
- couples who are entirely faithful	9	11	17
- people who have several sexual partners	87	90	84
Changed their behavior because of risk of AIDS	11	31	36
Using condoms	31	25	20
Take more care in choice of sexual partners	24	71	47
Plan to take blood test for AIDS	20	36	38
Perceived ways of catching AIDS			
- by sharing hypodermic needles	97	85	39
- intimate sexual contact with person of same sex	95	-	35
- intimate sexual contact with person of opposite sex	88	90	42
- working alongside someone with AIDS	11	34	19
- being coughed or sneezed on	25	56	20
- from insect bites	30	67	23

Source: *Gallup Report* no. 273, 1988.

Notes: - : question not asked

In Gabon's main city, more than 50% answer "don't know" to question about ways of catching AIDS.

The popular press has been discussing AIDS, and in the absence of more systematic surveys, the columns of newspapers provide clues to popular knowledge and attitudes, and of the extent to which local norms and prejudices might constitute an obstacle to an effective fight against the epidemic. In reviewing this material, Bledsoe (1989, 11) has

noted "how often media stories identify women as most at fault for spreading the disease to their partners." As Schoepf (1989, 5) puts it:

When men are infected, their wives are suspected of infidelity; when women are infected, they are assumed to have had multiple partners.

Bledsoe (1989, 15) notes that men are looking for sexual partners in "low-risk pools," and that newspapers often refer to

a new strategy that makes disturbingly good sense: older men have redoubled their attentions to school girls, who represent the largest pool of unattached young women in urban areas.

School children are a target of campaigns of sex education, a possible strategy to fight the diffusion of the disease. But sex education has often encountered the opposition of religious groups and of the upholders of conventional morality. Established churches have generally defended the view that AIDS represents a vindication of moral teachings. For example, an article in Zambia's *National Mirror* on October 1, 1988, claimed: "With the coming of AIDS, this justifies the Church's first stand on the rightfulness of monogamous marriages," while in the *New Nigerian* of September 9, 1988, an article discussed "the Koran's remedy for AIDS: abstain from fornication and adultery." The main Christian denomination of Congo, the Evangelical Church, uses the slogan: "Morality protects also against the virus" (Langellier, 1989).

In many countries, religious authorities and parents alike have put up fierce resistance to attempts to introduce sexual education in the schools, and have argued that this will legitimate premarital sex, encourage sexual licence, and, ultimately, further the spread of the epidemic. AIDS is seen as a warning to the sinful to change their ways, and "safe sex" as a pathetic attempt to avoid retribution. Even where the churches' influence is not strong, many African parents are wary of the schools' meddling in an area where they feel they have already lost too much control over their children. They fear that too much knowledge may be dangerous, as it may encourage their daughters to be promiscuous, or unfaithful to their husbands when they marry.

The special opposition to condoms has been analyzed at length by

Bledsoe (1989). Potentially fecund intercourse is an important component of sexual relations, even outside of marriage, and the use of condom denies a man children. A woman who wants her partner to use a condom is considered promiscuous or assimilated to a prostitute: Either she admits that she may be infected with HIV, or she shows that she suspects that her partner may be. This is a no-win situation, and it is not surprising that much of the success of campaigns to promote the use of condoms has been limited to the context of prostitution.

Understandably, then, the message of governments has generally been merely one of information, with slogans such as "AIDS kills." The injunctions concerning change in behavior have been mild: "Love carefully" in Uganda, "Stick to one partner" in Botswana, "Responsible behavior" in Congo. . . .

## The Long-Term Social Implications of AIDS

The social and cultural implications of AIDS on sub-Saharan Africa will only become obvious in the long run. At this writing, the tragedy has occurred too recently, and the disease is still too far away from its endemic stage, for the forms and modality of the assimilation of the disease into public consciousness to be apparent.

In evaluating the prospect of adaptation to endemic HIV, we have to speculate. Societies, almost by definition, adapt with time: they do not wittingly commit suicide. Whatever the psychological trauma, whatever forms of collective or individual denial the initial reaction has taken, the populations of sub-Saharan Africa will learn to live with AIDS and to minimize its impact by long-term changes in behavior. Unfortunately, the process is likely to start in earnest only after HIV is deeply implanted in every country of the subcontinent, when the persons who are now being infected begin to die, and the death rate has increased appreciably. The age distribution of AIDS will change, as the symptomatic stage of the disease is reached among those infected at a younger age.

In the meantime, the easy steps to control the epidemic will be taken. The blood supply will be cleaned, and blood donors will be systematically tested. Prostitutes will learn to use condoms, and will be subjected to testing. Their number will decrease, both because of mor-

tality, and because the stigma of the disease will make the profession increasingly a scapegoat to public anger. And the fight against other sexually transmitted diseases in the population at large will intensify.

The cost of coping with AIDS patients will escalate until it absorbs an overwhelming part of the social budget. Although health systems will do their best to promote community-based care, there is no assurance that families will be willing or able to care for AIDS victims when the whole nuclear unit—husbands, wives, and children—has been infected. Bledsoe (1989) foresees a special problem with AIDS orphans; female victims are often cast as promiscuous, and may be rejected together with their children by the kinship group. In many African societies, the widow has no property rights at the death of her husband, and the traditional systems of widow inheritance (i.e., the automatic remarriage to a brother or another relative of the deceased) may break down. The state will have to step in where family solidarity has defaulted.

International funds and expertise will continue to be crucial in coping with the economic cost of HIV prevention and treatment. The staying power of external assistance program over a very long period is not guaranteed in a world where other continents may increasingly be contaminated by the epidemic. The cost of effective medicine is likely to remain prohibitive for the impoverished populations of sub-Saharan Africa. Prevention will remain the only defense of individuals against AIDS within the foreseeable future.

Under these circumstances, it would be surprising if a much stricter sexual morality were not to emerge from the crisis. In the long run, sexual behavior and marriage customs are likely to be profoundly transformed. Two pillars of the present nuptiality system in much of sub-Saharan Africa—the large difference in age at marriage and polygyny—are likely to crumble under the impact. If there is a substantial reduction of extramarital relations, the prognosis is for earlier male marriage. This could happen at the cost of a reduction in polygyny and an increase in the number of widows in the population. The question of what will happen to the age at marriage for females is not easy to answer. If gains in female education and in female autonomy continue, the trend should be up. But the public believes that young women in high schools and colleges, and unmarried women in the labor force, are liberated from the controls of their families and exposed to the temptations of early sexual activity. Public opinion may accept the need for sex education in

the schools as part of the preventive measures against AIDS. If, however, there is a traditional backlash, if city life, modernization, and female education are blamed for the epidemic, then hard-gained advances in the condition of women may slow down, and age at marriage may go down.

The higher incidence of HIV in urban areas means that the old mortality differential, which favored the countryside until the beginning of this century, will once again prevail. As in eighteenth-century Europe, sub-Saharan African cities will be once again considered "the graves of mankind." Will that be sufficient to reverse the old urban bias, and dry up migration streams? Probably not. The economic function of cities is irreplaceable, and with the present rate of urbanization, they would continue to grow even with a much higher mortality (Bongaarts 1988, 35).

The "natural history" and "social future" of AIDS in sub-Saharan Africa do not invite invidious comparisons with the epidemic in the United States, Europe, or other pattern 1 countries. Apocalyptic visions of the virtual decimation of much of Africa's population are unwarranted, but the growing devastation of a range of national aspirations is very real. Many of the social values, traditions, and norms embedded in sub-Saharan cultures, so far as we can determine from imperfect data on incidence and prevalence, have shaped the nature of the AIDS epidemic. Some of these are clearly linked to demographic factors of age and sex distribution, morbidity and mortality patterns, and increasing urbanization. Others are rooted in cultural dimensions of marriage, sexual practices, and childbearing. As the AIDS epidemic continues to exact its toll, these very demographic and cultural patterns are likely to change.

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