

# Migrant Labor and Sexually Transmitted Disease: AIDS in Africa\*

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*Acquired immune deficiency syndrome (AIDS) is worldwide, but the clinical and epidemiological pattern of the disease in Africa is different from that in developed areas. "Type 1 AIDS" occurs in industrialized North America and Europe; it has a distinctive sex ratio (16:1) and risk pattern of IV drug use and sexual practices. "Type 2 AIDS" occurs in Third World countries, particularly in eastern, southern, and central Africa. It is characterized by an entirely different sex ratio (1:1) and by distinctively different risk patterns. Both epidemics are caused by the HIV-1 virus. The key concept for understanding the origins of the differences between Type 1 and Type 2 AIDS is the migratory labor system in eastern, central, and southern Africa. This system causes long absences, increased family breakdown, and increased numbers of sexual partners. Historically the organization of this labor market has created a population which suffers from epidemics of sexually transmitted diseases. These historical patterns are presented as evidence for the contemporary transmission of AIDS. When contemporary AIDS and HIV-1 seropositivity prevalence data are examined, a systematic temporal and geographic pattern emerges for the AIDS epidemic in Africa. Despite a paucity of good data, the prevalence data from eastern, central, and southern Africa support the thesis of migrant labor's role in the transmission of AIDS.*

The following paper integrates four areas of history, research, methodology, and theory. First, it incorporates a scientific understanding of the HIV-1 virus and the action of this virus in the creation of acquired immune deficiency syndrome (AIDS). The modes and methods of transmission in both Africa and the United States are the basis of understanding in the following discussion.

Second, in combination with an understanding of the biology of the HIV-1 virus and of the AIDS that results, this paper uses an analysis of epidemiology known as "historical materialist epidemiology." Accordingly it assumes the primacy of economic life, economic patterns, and economic development. This economic foundation sets the basic parameters of health and illness in society. This method of approach is derived

from work done by such early thinkers as Frederick Engels, Rudolf Virchow, and Salvador Allende (Waitzkin 1983, pp. 65-85). This early work was followed in the 1970s and 1980s by a great deal of research and writing on disease and health. The historical materialist approach was taken in a series of articles concerning coronary heart disease and hypertension (Eyer 1975; Eyer and Sterling 1977; Schall and Kern 1986), cancer (S. Epstein 1976, 1978), suicide (Hopper and Guttmacher 1979; Waldron and Eyer 1975), occupational health and safety (Chavkin 1984; Navarro 1982; Navarro and Berman 1983; B. Smith 1981), women's longer life span as compared with men's (Waldron 1986), and the expansion and contraction of economic cycles and mortality rates (Eyer 1977; Waldron and Eyer 1975). This approach may be described as a method that "relates patterns of death and disease to the political, economic, and social structures of society" (Waitzkin 1978, p. 272). Special applications have been made to Third World

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societies, relating underdevelopment, dependency theory, and health (Doyal 1981; Navarro 1974; Turshen 1977).

Third, this paper's assertions are based on a study of the historic, social, and economic development of eastern, central, and southern Africa, the Africa of migrant labor and the labor reserve. The development process has been described by dependency theory; therefore this paper is grounded in dependency theory (Amin 1976; Foster 1986; Frank 1967; Leys 1975; Rodney 1982; Saul and Arrighi 1973). World systems theory has elaborated on dependency theory; the work in this paper also complements the studies in world systems theory on the household in the world economy (Friedman 1984; Martin 1984; J. Smith 1984; Wallerstein 1984; Wallerstein and Martin 1979). The structure of the household, its size, and its varying composition, as well as degree of proletarianization, wage and nonwage work, and migrancy, are integrated into the following analysis with considerations of health, well-being, and disease. These household structures are defined by their place in the world system; consequently, it is argued in the subsequent presentation, health and disease are defined by place—core or periphery—in that system.

Finally, an understanding of the medical and population geography of central, eastern, and southern Africa is integrated into the thesis advanced in this paper (see Hall and Langlands 1975; Kabera 1982; Langlands 1975; Meyer 1988; Prothero 1977, 1983; White 1978). The population's geographical movements in these regions of Africa, often termed oscillations rather than migrations, give rise to the characteristic concentrations of labor around plantations, mines, and other capital investments. These movements, interacting with historical development patterns, give rise to the labor reserve, the rural farming area which often is in decline because of the patterns established by dependency and migrant labor (P. Epstein and Packard 1987). This pattern of movement and labor market affects Africans' family and sexual patterns (see Murray 1977, 1980, 1981); as I argue here, it creates a population that is susceptible to sexually transmitted disease (STD), AIDS in particular. A study of past spatial patterns—the medical geography of STDs—will reveal the historical relationship of STDs to migrant labor. This pattern, it is argued, has been

repeated in the AIDS epidemic of the 1970s and 1980s.

## AFRICA AND AIDS

Acquired immune deficiency syndrome is epidemic in the United States, but it is more than an epidemic. AIDS is a pandemic: it is *worldwide* in distribution and began almost simultaneously in a number of areas in the world. World Health Organization (WHO) officials estimate that "over 250,000 cases of AIDS have already occurred, that between five and 10 million people worldwide are infected with the AIDS virus and that within the next five years about one million new AIDS cases can be expected" (Mann, Chin, Piot, and Quinn 1988, p. 82). By March 1, 1988, there were 81,433 reported AIDS cases in 133 countries (WHO 1988).

AIDS has appeared in the Pacific Oceania complex of islands and Australia, in South and Central America, and, although delayed, in Asia. Nowhere, however, was its appearance more ominous than in Africa (Andersen, May, and McLean 1988).

It is extremely difficult to judge the exact extent of AIDS in Africa, either geographically or in the population (Konotey-Ahulu 1987, pp. 206–207). Rwanda, Burundi, the Congo, Zimbabwe, Botswana, Zaire, Zambia, Kenya, and Uganda seem to be particularly afflicted (Mann and Chin 1988; Mann et al. 1988). These countries form what has been called "the AIDS belt" across eastern, central, and southern Africa.

AIDS was first discovered to be present in Africa when it was diagnosed in upper-class Africans seeking treatment in European hospitals. The first African cases were diagnosed in Europe shortly after the first diagnosis of AIDS occurred in the United States (Quinn, Mann, Curran, and Piot 1986). African AIDS, however, has two distinctive aspects in relation to the AIDS epidemic in the United States.

First, the sex ratio of those who have AIDS in Africa is approximately 1:1, an equal number of females and males (Biggar 1986; Brunet and Ancelle 1985; Curran, Morgan, Hardy, Jaffe, Darrow, and Dowdle 1985; Mann and Chin 1988; Mann et al. 1988; Mann, Francis, Davachi, et al. 1986; Mann, Francis, Quinn, et al. 1986; Quinn 1987; Quinn et al. 1986). This ratio is in sharp

contrast to the 16:1 ratio of males to females in Europe and the United States (Quinn et al. 1986). The disparity is related to the different risk patterns associated with African and with North American AIDS cases. In Africa neither homosexuality, homosexual sexual patterns, nor IV drug use are associated with AIDS or found as a means of transmission for the AIDS virus (Biggar 1987; Brunet and Ancelle 1985; Carswell 1987; Clumeck et al. 1985; Kreiss 1986; Moodie 1988; Quinn 1987).

When the illness is studied epidemiologically, primarily *sexually active heterosexuals* are seen to evidence the highest incidence of AIDS in Africa. Females who have AIDS in Africa tend to be younger than males, and often are single. There appears to be a higher incidence of AIDS among prostitutes than among African women generally (Biggar 1986; Brunet and Ancelle 1985; Quinn 1987; Quinn et al. 1986). Because women contract AIDS in Africa much more often than in North America, and because it appears that AIDS can be transmitted across the placenta from the infected mother to the fetus, there are many more children with AIDS in Africa than in the United States (Mann, Francis, Davachi, et al. 1986); in fact, children constitute almost one-third of all AIDS cases in Africa (Hilts 1987). As in the United States, AIDS in Africa appears to occur much more frequently in large cities than in the rural areas, at least at the present (although this may be a reporting bias, as we will discuss later). As in Europe and the United States, those who are discovered to have the AIDS virus frequently have a medical history of previous venereal diseases and appear to be more sexually active than those without AIDS (Quinn 1987; Quinn et al. 1986). The patterns of AIDS infection in the industrialized countries of North America and Europe is so distinctive in relation to the pattern in Africa, Haiti, and parts of Central and South America that the former is often termed "Pattern 1 AIDS" and the latter "Pattern 2 AIDS" (Mann and Chin 1988; Mann et al. 1988; Piot, Plummer, Mhalu, Lamboray, Chin, and Mann 1988).

AIDS in Africa has a second distinctive aspect. In the United States and in Europe a definite series of "opportunistic" infections occurs with AIDS, such as Kaposi's sarcoma (a skin cancer), toxoplasmosis (a parasitic disease spread by cats and chickens, which is

usually harmless for those not suffering from AIDS), or a type of pneumonia. In Africa, in contrast, the opportunistic infections usually do not include any of these. Generally the infections suffered by AIDS patients in Africa involve the stomach or the digestive system, some skin diseases (in some cases Kaposi's sarcoma), tuberculosis, herpes zoster, and meningitis (Quinn et al. 1986). Thus in Uganda, AIDS is termed "slim disease" because of the wasting that occurs as a result of these infections. AIDS in Africa is epidemiologically and clinically quite distinct from AIDS in Europe or in North America. In fact, "the definition of AIDS used in the West needs to be broadened for use in Africa" (Norman 1985).

If the biological agent of the disease is the same in North America and Europe as in Africa—and research has proved that this is the case (Biggar 1986)—why do AIDS in Africa and AIDS in the United States look and act so different? Why is the same biological cause linked to such different demographic and clinical results? In short, why are there Pattern 1 and Pattern 2 AIDS epidemics? The answer lies in the social/historical environment in which the biological cause, the HIV virus, acts.

When AIDS is viewed in this way, one can advance a strong thesis that the main historical fact of African social, political, and economic reality is the situation of underdevelopment and the position of dependency in which many African nations find themselves with respect to the core capitalist countries. This relationship of underdevelopment and dependency, particularly as it affects African health, labor market organization, and rural agricultural development, has largely determined the pattern of the disease in Africa.

## DEPENDENCY AND AIDS

First we will examine African historical and economic development in terms of industrialization and the development of a labor market. Then we will discuss the effect of this development on rural and agricultural areas. This background will help us to understand how these factors interact with the AIDS virus.

The pattern of industrial development in southern, eastern, and central Africa, which was followed by colonization of this area by

the European powers and has continued to the present, was based largely on a migrant labor system (Crush 1984; Davidson 1983; Doyal 1981, pp. 11–119; Freund 1984, 1988; Gugler, 1968; Gutkind and Wallerstein 1976; Karugire 1980; C. Leys 1975; R. Leys 1974; Mamdani 1976; Parpart 1983; Roberts 1979; Sathyamurthy 1986; Stichter 1985; Turshen, 1977, 1984; Wallerstein and Martin 1979). Mining, railroad work, plantation work, and primary production facilities absorbed capital investment and became enclaves of development in an immense, underdeveloped continent. Just as these industries absorbed capital, they absorbed large quantities of labor from the rural areas, concentrating great numbers of male workers. The effect on these men and on their families is described well by Lesley Doyal (1981) in *The Political Economy of Health*:

The migrant labor system affected Africans' lives in many fundamental ways. Whatever the miseries of industrialization in Britain, it was usually possible for workers to keep their families together, but this has not been the case in third world countries. In Tanganyika, for example, male workers were typically recruited from designated labour supply areas great distances from the centres of economic activity. This entailed prolonged family separations which had serious physical and psychological repercussions for all concerned. The populations of African towns 'recruited by migration' were characterized by a heavy preponderance of men living in intolerably insecure and depressing conditions and lacking the benefits of family life or other customary supports (p. 114).

Through the migrant labor process and the enclave development system, the African workers, largely male, concentrated at the site of industry, agriculture, or extraction. In many cases the resulting depletion of males from the rural villages and farms caused a marked deterioration in women's ability to carry on alone and to provide for their families. A reduction in labor available to do farm work resulted from the men's employment-related migration (Stichter 1985). The dependency ratio (the number of very young and very old) increased in the rural areas and in the labor reserves (Murray 1981). In many cases, women began to change crops; although these crops were prolific and could

feed many mouths, with the added benefit of requiring less labor input, they were largely carbohydrates rather than protein. Cassava is such a crop (Stichter 1985). This change in cropping patterns led to protein deficiencies and compromised the immune systems of persons living in the labor reserves (McCance and Rutishauser 1975). In fact, some studies show that simply the increased labor demand on women, with the reduction in time to attend to their children's nutritional concerns, leads to declines in children's nutritional status whether or not cropping patterns and crops have changed (Vaughn and Moore 1988).

Lack of labor to assist in land clearing produced overcropping of already-cleared areas, deterioration of the land, and loss of fertility. The loss of fertility also contributed to a reduction in yield, which further encouraged the growing of higher-yield crops on poorer soils, although these crops were less nutritious than in the past (Stichter 1985). A "bachelor wage" system usually produced little money income for migrant laborers to send back to a family on the labor reserve; thus the labor reserve subsidized other sectors of the economy to its own detriment (Stichter 1985). This cycle continues in a process of declining agriculture.

In addition, and particularly in recent decades, many unmarried rural women saw no means of adequate support for a family and thus emigrated to the city at a young age (see Murray 1981; Stichter 1985). Family conflict and separation also have caused many young women to migrate to the cities and to concentrations of male labor. Unfortunately, however, very few women have found wage labor or work of any kind (Doyal 1981, p. 116; Stichter 1985); there is little wage employment for women in the developing African economy (Stichter 1985, pp. 144–78). Some—perhaps many—of these women become prostitutes and enter the marginal or secondary labor market in the areas surrounding the large concentrations of men and development (Doyal 1981; Stichter 1985).

The combination of the migrant labor system with a heavy preponderance of male laboring jobs and long familial separations caused a breakdown in family and sexual patterns in central and southern Africa (Murray 1981). An explosion of both prostitution and sexually transmitted diseases (STDs) in these populations occurred well before the

AIDS virus made an appearance (Bennett 1975; Brown, Zacarias, and Aral 1985; Rampen 1978; Sajiwandani and Babbo 1987; Sathyamurthy 1986). As Doyal 1981 states:

. . . venereal disease became—and still remains—a major health problem in many parts of the third world where it was previously unknown. It is hardly surprising that the disruption of the economic and personal foundations of family life led to the disintegration of long-established marital and sexual patterns. In this context, the growth of prostitution represented one form of adaptation to the intolerable strains faced by men and women alike. In the case of male migrants, the absence of their wives was compounded by the fact that their new environment was almost exclusively masculine. This unequal sex ratio made it difficult for men to establish stable sexual liaisons with women, and encouraged prostitution. For the women involved, prostitution was usually a matter of sheer economic necessity . . . The structure of the colonial economy made it virtually impossible for women to sell their labour . . . most were compelled to live off the low wages of male workers. Often this involved either formal or informal prostitution (p. 115–16).

The development of the migrant labor and industrial pattern led to serious health consequences, particularly to an epidemic of sexually transmitted diseases in central and southern Africa. This pattern was clear even in 1981, when Doyal wrote the above (Osoba 1981).

In addition to the “pull” effect of industrialization and the migrant labor markets and the “push” effect of declining agriculture with reduced labor inputs, a “push” effect was produced by capital’s takeover of African agriculture (Loewenson 1988; Sanders and Davies 1988). As in many Third World countries, the best and most fertile lands are used by capital to produce agricultural goods for export. Local food production is marginalized on poor land; rural labor needs become seasonal; as a result of large-scale monoculture and mechanization, rural “overpopulation” is “pushed” into urban slum areas. In these areas poor health, disease, and malnutrition abound. Employment is difficult, especially for women; family life may become difficult (Stichter 1985). The result,

as with the “pull” effect of large capital developments, is the social creation of a population especially vulnerable to venereal disease and particularly to AIDS (P. Epstein and Packard 1987, pp. 10–17).

As a consequence of the migrant labor pattern and the capitalist takeover of rural African agriculture, AIDS had a ready population that suffered from an unusually high level of sexually transmitted diseases. Because of residual lesions and injury, the higher incidence of previous venereal disease (especially if untreated) increases the likelihood of contracting AIDS (Quinn et al. 1986, pp. 957–58; Stamm, Handsfield, Rompalo, Ashley, Roberts, and Corey 1988).

The manner in which labor is handled in migrant labor situations makes the resulting epidemics much worse. Such a labor system, in which migrants recruited from rural areas surround industrial and extractive developments, does not require care for the health or the safety of the working population. As long as labor power is in surplus in the rural and urban areas because of the expansion of capitalist agriculture and the existence of the labor reserve, injured or incapacitated workers can be replaced easily by subsequent migrants. Workers who no longer can work under such conditions simply return to their villages (Doyal 1981, p. 119). Further, workers’ ability to combat poor working conditions and to demand health benefits from employment is severely compromised because migrant laborers are historically difficult to unionize or to organize for resistance to employers (Stichter 1985).

Urban slum dwellers, who lack medical care because of unemployment, also return home regularly when ill, carrying urban disease back to their rural villages (Doyal 1981). Thus a woman who is a prostitute and who becomes ill is very likely to return to her home village to be cared for by relatives.

In the case of sexually transmitted diseases and many other illnesses, this return home has tragic consequences. Tuberculosis and STDs are carried back to the village, infecting areas where they have not been seen before and striking populations that lack resistance or previous exposure. “Whether or not these migrants survived their diseases, the diseases invariably survived them, often spreading rapidly among an increasingly susceptible population” (Doyal 1981, p. 119).

Therefore there is little question that AIDS