

PART I

African Demographic Growth

The Most Erratic
Development in History

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Demography, Ecology, and History

Africa's demographic history is the least studied in the world, yet it is perhaps the richest in contrasts, and it lies at the very heart of the historical process. It has been suggested that the emergence of political systems depends on population density: states would be unlikely to form or would break up if that density fell below a certain level.¹ The fact that the exercise of power in Africa has taken fairly specific forms without necessarily involving the territorial framework of a state suggests that it may be worthwhile to trace the periodic drainage of population on the African continent in pre-colonial times, affected—but just how is a matter of controversy—by the slave trade; in the colonial period, under a coercive system; and in the postcolonial period, with its recurrent famines. These changes are ultimately connected to the issue of the relationship among the history of the climate, the history of the fragile ecology, and the history of the people—both of the societies and of the political systems.

THE ECOLOGY

Climate

In societies whose low level of technological development renders them particularly vulnerable to the effects of imbalances of nature such as droughts, accidents of climate may be closely related to great social and political mutations. A case in point is the area of west-central Africa today known as Angola, an area of poor soil and great variations in rainfall where, in addition to frequent, relatively insignificant short periods of drought, major droughts occur in almost every decade and a drought of seven years or more comes nearly once in a century.² Between 1550 and 1830, some 170 droughts and epidemics (which are usually a consequence of drought) have been recorded. Social revolutions of a structural kind seem to have corre-

sponded to the major periods of drought: thus, at the close of the sixteenth century, the Jaga revolution, coinciding with a breakdown of agriculture, encouraged the emergence of the Imbangala, warriors who adopted pillage as a way of life and were much used by the Portuguese in the conduct of the slave trade. Were these not, in fact, hordes of desperate marauders, forced to move onto areas less affected by aridity? This hypothesis is corroborated by oral tradition in the form of a myth of origin employing a metaphor of food: once a group of desperately hungry travelers were able to find relief only by taking the sorghum and millet found in the gizzard of a bird (a reference to the return of part of the group to agriculture once the drought had ended). Moreover, the conduct and ideology of the Imbangala seem to derive from their extreme penury; for example, the ritual murder of children and cannibalistic rites could be expedients to which major periods of famine had reduced them. At any rate, the Imbangala raids resumed when a drought occurred (in 1630–1640 and again in 1650).

Similarly, the drought that lasted from 1784 through 1793 favored a renewal of precolonial Portuguese domination, for those affected flocked to less densely populated areas—the kingdoms of Kasanje and Matamba, the central Kwango valley, and the Ovimbundu states of the central plateaus. Therefore, hunger delivered many victims into the hands of the slave-traders, sold by their masters, or even by their parents, as a means of surviving scanty harvests.

A similar relationship among drought, demography, and migrations can be reconstructed in the northern interlacustrine region of present-day Uganda.³ During the last millennium, political history has been affected by climate. Research into the dynastic chronologies handed down by oral tradition (going back to the tenth or eleventh century), an examination of the water levels recorded by the Egyptians from the eighth century onward, and the succession of droughts (identified by determining the lowest levels of the White Nile) together reveal that in the history of Uganda—the rise, climax, and decline of clans and tribes and, even more tellingly, of dynasties—political crises were due, above all, to the ecological disorders produced by lack of water.

The Effects of Agriculture

The revolutionary introduction of cassava and maize by the Portuguese had considerable demographic consequences in the fifteenth and sixteenth centuries: in the short run, at least, the spread of cassava, an easy plant to cultivate, increased the demographic capacity of the Congo Basin, although in the long run this was counterbalanced by the higher rates of sickness and mortality caused by the low nutritional value of the new plant.

Much earlier, the diffusion of crops had permitted Bantu expansion from the Congo Basin at the expense of the hunters and gatherers (Pygmies, Bush-

men) who had inhabited those areas. Later, the adoption of maize, red beans, sweet potatoes, and then regular potatoes—all plants of American origin—played similar roles at different periods, and these revolutions continued until very late. Thus maize, which reached the northern Congo Basin after 1830, became a major Zande crop only in about 1900. Unknown in Kenya until about 1880 and cultivated only on the east coast until the end of that century, maize has just recently become important in central Africa, and yet today the whole of eastern and southern Africa, from Kenya to the Cape, appears to the traveler to be an agrarian civilization based on the association of maize and livestock.

The landscape of the tiny country of Rwanda, despite its sheltered position as a mountain refuge tucked away among the lakes of the Rift at the very heart of the continent, has likewise been transformed. Still cultivated using almost Neolithic methods, that is, with a preindustrial technology, today all the land is devoted to nonnative crops (leaving virtually no pasture for cattle). With the exception of bananas (which arrived via the Indian Ocean about the tenth century) and pyrethrum (which probably came from China), Rwanda subsists entirely on crops of American origin—red beans, maize, cassava, potato—even though local species of beans and eleusine once existed there. In the northwest, in association with the Institute of Peru, the cultivation of a variety of potato specially suited to the volcanic mountains there has brought about a kind of “green revolution,” competing successfully with the “cash crop” of tea even though the latter is of world-renowned quality. The high population density of the country may well be a direct result of this success.

Similarly, it was only in the twentieth century that cassava cultivation spread rapidly in western Africa, at first on the coast and then, after 1920, in the interior. On the Nigerian coast, its success from that time forward at the expense of the yam, which is far more labor-intensive, reflected the magnitude of the crisis of subsistence created by the disorganization of agriculture and shortage of food, compounded by World War I and the epidemic of Spanish influenza in the years 1918–1919. At that time, of the nine million inhabitants of southern Nigeria, as many as two hundred and fifty thousand people died: adults were more vulnerable than children, the young than the old, the men than the women. Thus, the major losses were of young adult males, with a consequent decline in the labor force and in productivity: markets, roads, and “native courts” were closed; schools and churches were transformed into makeshift hospitals. Oral accounts confirm that the widespread cultivation of cassava coincided with this tragic episode,⁴ and its rapid spread also matched the new urban growth. Town-dwellers appreciated the virtues of *garri* flour, which was cheap and was easy to prepare and, especially, to store. The arrival of commercial trucking and the completion of the railway in central and western Nigeria facilitated transport from the

area of production to the areas of consumption—mining, administrative, and commercial centers.

Still more recently, rice has taken hold on the Ivory Coast. Whereas the colonizers never succeeded in imposing its cultivation, nowadays the smallest piece of low ground is used for growing rice—at present, it is true, for sale rather than for subsistence.

Despite these examples, one should not attempt to account for events in the precolonial period entirely by meteorological determinism or to explain demographic crises solely in terms of colonial coercion. One basic question remains unanswered: Have demographic expansions been caused by such changes in production as the introduction of new plants by the Arabs or the Portuguese, or is demography an independent variable, situated more or less outside the sphere of history?⁵

The problem first arises in connection with the Neolithic revolution of the sixth millennium B.C., which brought about the spread of agriculture south of the Sahara toward Ethiopia and West Africa some three thousand years ago. Did the transition to agriculture promote demographic growth which in turn favored the diffusion of new techniques? Or, on the contrary, did a disturbance in the demographic equilibrium of the hunter-gatherers force them into a new and, generally speaking, less attractive way of life that involved more work and a more stringent organization of labor? The Neolithic revolution can hardly be explained by the inadequacy of the size of the population in relation to its environment; on the contrary, the first agricultural settlements appeared at a period of favorable climatic conditions both in Egypt and in southwestern Asia. The disequilibrating factor was, if anything, an independent increase in the population, in much the same way—if I may offer such a bold analogy—as in England in the eighteenth century a demographic revolution gave rise to an agricultural revolution which in turn brought about the industrial revolution.

In ancient Africa, demographic growth over the long term was in all probability very slow for many centuries at a time, as is indicated by archaeological sources, which date the relatively intense population of the sub-Saharan not from the beginnings of agriculture or of ironworking, but from much later, scarcely more than a thousand years ago, at the beginning of what in Bantu Africa is called the Later Iron Age.⁶ This acceleration was intensified with contacts with foreigners—first Arabs, and then Europeans.

DEMOGRAPHIC DISCONTINUITY IN THE TWENTIETH CENTURY

In demography, as in other spheres, the twentieth century has been a time of marked historical change. This change has taken place in two stages: a relatively sharp demographic decline at the time of the European conquest of

Africa, and an unprecedented population explosion beginning in the 1930s and culminating after World War II.

The decline can be explained as resulting from a number of afflictions of unprecedented intensity, unleashed on the precolonial world by the clash of two types of society: epidemics on a scale hitherto unknown in Africa (even if advances in hygiene generally prevented disasters like the one that decimated the American Indian population four or five centuries previously), ecological upheavals (resulting from the exploitation of virgin forest or the spread of speculative cultivation), and, finally and perhaps primarily, the dislocation of society. Opinions as to the precise chronology vary, but it is clear that there was a marked population decline in the last third of the nineteenth century and often in the first quarter of the twentieth.

The recovery may in turn be explained by the first sanitary measures, including the campaign against the great epidemic diseases such as sleeping sickness, and the first vaccinations (against smallpox and yellow fever), which greatly reduced the rates of mortality.

Previous to this, the evolution was much less clear. Were there or were there not sudden drastic changes? Much has been said about the negative demographic effects of the slave trade, which from the mid-seventeenth to the mid-nineteenth century were no doubt considerable but were probably diffuse, uneven. They doubtless took effect more over the medium and even the long term (owing to the changes brought about in the ratio between the sexes and in reproductivity) than as a sudden break at any given moment.

More rapid, from the sixteenth century on, were the consequences of the African contact with the American Indian world as expressed in the "cassava revolution." From that time on, the agricultural frontier of the forest was continually pushed forward by the combined efforts of the forest-dwellers and the agriculturalists. This resulted in a drastic change in demographic centers. The forest, until the end of the fifteenth century, was a relatively unpopulated area, inhabited by hunters and gatherers and, along the edge of the coast and by the side of the lagoons, by fishermen. Their major resources were fish and yams, plus leaves, fruits, and small animals.

The population of the forested area increased at first very slowly and then accelerated as time went on. Five hundred years ago, the forest zone contained perhaps a quarter of the total population of the continent and two-fifths of sub-Saharan Africa, increasing to two-fifths and nearly half, respectively, by about 1850. At the present time the situation has been reversed, with half the population of the continent and five-eighths of that of sub-Saharan Africa living in the forested areas. In the last five centuries, the population of the forested areas may have grown by a factor of twenty, compared to only six or seven in the rest of Africa. The rate of increase in the population of these areas today is tremendous, encouraged as it was by the colonizers, who tended to regard the rainy and forested areas as the "useful"

ones (except in southern Africa), and accentuated by the increasing disparity between the "underdeveloped" (particularly Sahelo-Sudanese) states of the interior and the states that are said to be "developing" due to their coastlines (for example, the Ivory Coast and Nigeria).

THE RHYTHM OF DEMOGRAPHIC FLUCTUATIONS

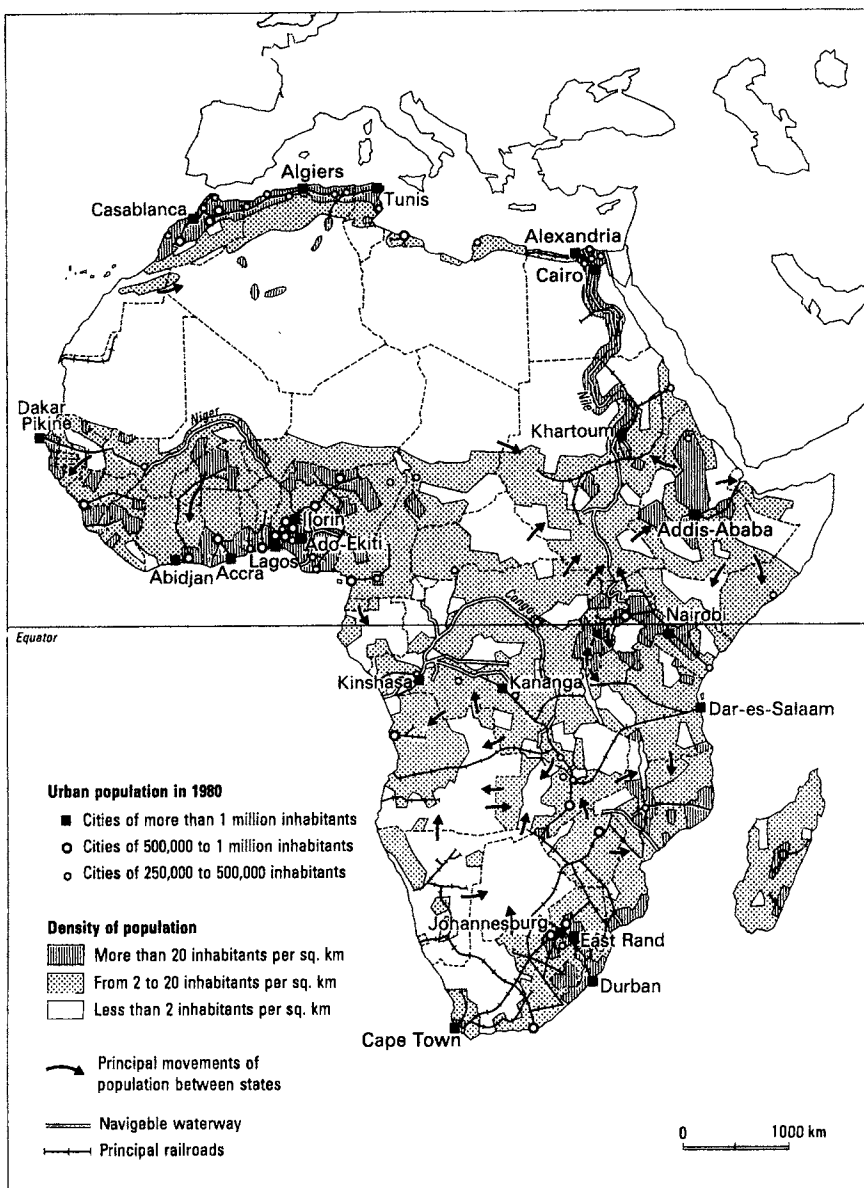
Demography touches the very foundation of humanity. Not only does it correspond to man's biological need to survive and to prosper, but it is connected with his metaphysical realization that survival is ultimately impossible. Right from the start, demographic reactions must be interpreted in both economic and ideological terms.⁷

The Forces of Life

At the present time, the average number of children born alive to each woman in Africa is close to seven, and the general birthrate is about 50 per thousand, although certain areas, such as the east coast and Central Africa (northern Zaire, the Central African Republic, Gabon, Cameroon, Rio Muni), do have lower rates (the phenomenon of the relative sterility of women in these areas is probably recent and is as yet ill explained). Overall, however, Africa at present has the highest birthrate of any continent.

It is a common belief of the African peoples that children are the greatest goods; the worst fate for a woman is to be sterile. A woman is also the greatest possession to acquire, as she represents the forces of production and, above all, of reproduction. These facts lead us to suppose that the forces of life affecting the birth and possible survival of children were perhaps greater in Africa than in the West.⁸

One key to the understanding of the history of development in the West is the initiatory role played by a demographic upsurge that brought an economic progress which was in the long run never nullified or swamped by an equal or greater increase in the number of consumers. Progress thus depended on a long-lasting general prosperity, guaranteed by the capacity of the European societies to regulate their numbers in each period in accordance with the productive forces of the moment. It is true that the Middle Ages were afflicted by a number of "natural" calamities that resulted at times in the reintroduction of a drastic demographic control which population acceleration over too long a period had been in danger of obliterating; the Black Plague of the mid-fourteenth century, which probably wiped out a third of the population, was the prototype of these calamities. Another, though less extreme, factor seems to have been changes in outlook that reinforced or even replaced control by the ecology. Thus, in the thirteenth century, at the end of the long period of medieval demographic growth, a sud-



Map 1. The Population of Africa

den ideological reversal came about. One sign of this was the Albigensian doctrine that the world of men was the creation not of God but of the devil, and it was therefore the duty of believers to end the renewal of the generations. Similarly, the recurrence of witch-hunts at the end of the sixteenth century and the beginning of the seventeenth seem to have expressed a sort of fury against women and their power of procreation; and under the impact of famine, even the Irish, so Catholic and so prolific, ceased for a moment to regard the birth of a child as the supreme social blessing.

Thus the premodern world experienced cycles of growth that were periodically arrested by demographic catastrophes at least partly resulting from this very growth. Clear objective causes such as wars of conquest by groups in the process of demographic expansion, famines (produced by crop failures and aggravated by meteorological events), or epidemics (exacerbated by famine-induced malnutrition) ought not to render us oblivious to more subtle factors, to social processes and currents connected with the history of ideas and ways of thinking. We must explore whether this type of control played a role in Africa, and, if so, what form it took.

Before the twentieth century, demographic demands in Africa probably never exceeded the means of subsistence available. Moreover, accompanying this low level of population was a relative abundance of land, which probably accounted for the lack of technical progress in agriculture. The Africans failed to develop agricultural techniques not because they were backward (as the colonizers claimed), but because their low technological level sufficed for their needs. Technical progress was superfluous in this extensive itinerant agriculture, which was low in productivity but constituted an adequate response both to fragile soils and irregular rains and to the problems of subsistence.⁹

This evidence reinforces the idea that the forces of life encouraging maximum procreation almost never encountered any obstacle in the African way of thinking (although, on a local level, certain rites of cannibalism and child sacrifice such as one finds among the Imbangala of Angola or the Manja of Central Africa may have been signs of a contrary tendency).

The Forces of Death

Only slightly lower than that of today, historically the African birthrate could generally be considered invariable: about 47.5 per thousand, on the average. It might be expected that this would have resulted in a relatively long-standing increase in the African population, a display of remarkably strong forces of life. It must be acknowledged, however, in order to explain the present demographic weakness, that the forces of death have proved to be even stronger, and it is the modulations of the deathrate that have decided the rhythms of natural demographic variations.

A hypothesis of relative demographic stability would presuppose a death-

rate similar to the birthrate, implying a life expectancy of about twenty-one years, but this is exaggerated. All the evidence indicates slow growth over a long period, which on a number of occasions gave rise to local demographic pressures that were sufficient to make a considerable mark on historical evolution.

An average slow growth-rate of about 0.5 percent a year would make the mortality rate drop to 45 per thousand with a life expectancy of twenty-two years. By comparison with the rates existing today in the areas farthest removed from modern sanitary services, that rate still seems too high. The most plausible hypothesis, then, is that of a far more pronounced rate of growth, for limited periods or regions sometimes reaching 2 percent a year. This would be compensated for by the periodic occurrence of phases of disequilibrium accompanied by natural or social cataclysms—in short, in a perhaps somewhat harsher version, the classic pattern of premodern Western demography.

Although in general the demographic pressure remained low, that did not rule out local or regional imbalances. Every time the period during which land was allowed to lie fallow was shortened, the demographic pressure was accompanied by a corresponding rise in the deathrate, for high population density led to malnutrition, which in turn promoted the spread of infectious diseases. It is a fact that, from the sixteenth century onward, periods of drought in Angola in which the population had to group together in the dampest areas were always accompanied by epidemics.

Finally, an increase in population inevitably involved an escalation of conflict between rival groups. Wars aimed at increasing the area a group controlled, and consequently mortality rose, especially for the vanquished group, either as a direct result of the war or, over a longer period, because of the resultant reduction in lands and crops. As for the victorious group, even if, for the moment, it could maintain its natural rate of growth or even improve it by spreading into new territory, this did not necessarily guarantee a positive rate for the entire area. Thus, at the end of the eighteenth century and the beginning of the nineteenth, the Zulu expansion in southeast Africa involved conquest of the high lands of the inner Rand which emptied them of their inhabitants and thus left them wide open to the advance of the Boer colonizers. Later, we shall see in the nineteenth and even the twentieth century the frequency of a correlation between the occurrence of droughts, famines, scarcities, and epizootic diseases, on the one hand, and demographic rhythms, on the other. The latter were made up of an alternation between phases of high mortality and a following compensatory leap in the birthrate (a phenomenon well known to demographers)—for instance, through a lowering of the age of marriage, greater freedom for girls, and an extension of polygyny.¹⁰ All these phenomena were intensified in Africa south of the Sahara by the tropical natural conditions (later aggravated by hasty colo-

nizer actions), since the critical threshold of population density beyond which the sickness ratio could become disastrous—threatening to reduce the population for decades—was remarkably low. A case in point can serve to illustrate our argument by showing both the slowness and the difficulties of the demographic growth of a certain subgroup, the Ani-Ndenye of the southeast Ivory Coast.¹¹

From an initial nucleus of two thousand to three thousand inhabitants—a density lower than one per square kilometer—the population probably quadrupled in two centuries, a far from negligible increase. One sign of this growth was the appearance, in three successive waves, of new villages which one after another filled in the vacant spaces between the others, while always remaining under the political control of the dominant families.

But the cost was great: most of the time, natural population growth was almost nil. Mortality, especially infant mortality, was very high: this can be seen from the behavior of the group, which tended to minimize the value of children, regarding them as incomplete persons; only a woman's fourth dead child had the right to a funeral. Whereas the death of an adult was always felt as a mutilation and an abnormality, since it could have been due to other than natural causes, the death of a child at birth or in infancy was regarded as a quite natural phenomenon. The chronic demographic malaise can also be seen in the number of "demographic accidents" that interrupted the normal line of succession in the royal families. On several occasions, a dynasty lacked any male heir, a particularly serious situation in this matrilinear society in which, if women transmitted power and goods, it was the men who wielded the power and disposed of the goods. And yet the reproductive potential of the women of royal lineage seems to have been exploited to the full. They enjoyed the greatest freedom in their choice of a partner; he could even be a captive or a passing stranger.

At last the only remedy was to violate the laws of sanctity of the group, by turning to foreigners who had either come of their own free will, been taken by force, or been adopted through marriage. Thus, the phenomenon of migration was originally indissociable from the demographic phenomenon, a fact which was particularly evident in Africa, where displacements of peoples were a constant factor of history.

AN OVERVIEW OF AFRICAN POPULATION

Starting with these preliminary observations, we can attempt to evaluate the size of the sub-Saharan African population in history, and to identify its major fluctuations. Was Africa perhaps once the most highly populated continent in the world?

The facts and figures most frequently given are not necessarily the most accurate. Even the United Nations, in a retrospective view, refers to B. Ric-

cioli's assessment in the seventeenth century.¹² Riccioli, a Jesuit who attached much importance to the mystical value of numbers, estimated the population of the world at roughly one billion, divided among the continents. This estimate has more or less as much value as the rough-and-ready one concerning the slave trade given by an American journalist at the end of the nineteenth century, which has been cited as authoritative and slavishly recopied in one work after another up to some of the most recent studies of the question.¹³ It is true that Riccioli's figures were challenged half a century ago in Willcox's works, which themselves were corrected shortly afterward by Saunders and then more recently by Durand, who finally arrived at a compromise between the previous estimates.¹⁴ The historians of demography, both of Africa and of the rest of the world, have, needless to say, accepted these figures only with reservations.

What, nevertheless, should we think of Riccioli's estimate of a hundred million Africans in 1650? If this number is accurate, Africa must have been one of the most highly populated areas in the world (together with China, with a hundred and thirteen million, and India, with a hundred million), whereas today it is comparatively little populated (it would have accounted for nearly 20 percent of the world's population in 1650, compared to only 13 percent in 1750, 10 percent in 1800, and 9 percent in 1960).¹⁵ Archeology has begun to come to our aid (showing, for instance, that Mali, south of the Niger Basin, was once a cultivated area, at least at the beginning of our era), but proof remains scarce. Such evidence as exists is founded on the idea that, by and large, until about a century ago the population enjoyed a remarkable stability of long duration. However, a very slow rate of growth—around 0.25 percent—could have permitted the population to double or even to quadruple over half a millennium, if the deathrate, as is in fact very likely, was only 2.5 per thousand lower than the birthrate.

If this population growth failed to occur—with all the implications of stagnation this holds for history—it was because the forces of death were stronger in Africa than elsewhere. Two factors contributed to this: a relative hostility, or at least vulnerability, of the natural environment, which was at any rate harsher than elsewhere; and external factors that heavily affected the demography of Africa (the slave trade, colonial coercion).

NATURAL HANDICAPS

Without falling into geographical determinism, we may legitimately ask why agriculture, which appeared in the Sudan about 4000 B.C., took five millennia to become the dominant mode of subsistence further south, in the dry savannas; or why the wheel, known to the ancient Egyptians and attested to in the Sahara, was not adopted further south. It was no doubt because the environment was hardly suitable, probably because of insufficient

rainfall and unfavorable soil, while, still further south, the wet savannas and forests, which potentially had more to offer, were the foci from which radiated parasitic diseases especially weakening for the human organism. The people of the Pleistocene age were already familiar, notably, with malaria, viral hepatitis, and herpes, and they had probably learned to avoid areas infested with the tsetse fly, the carrier of sleeping sickness.¹⁶ The spread of this disease in wet areas, as well as of malaria (transmitted by *Anopheles* mosquitoes) and onchocerciasis may explain why, since valleys were avoided in ancient Africa, irrigated agriculture was rarely practiced.¹⁷ This is very different from the idea, formerly held, that the Sahelo-Sudanese peasant societies stagnated because the "barbarian prosperity" of the country provided them with a comparatively luxurious existence which did not encourage them (as conditions did for those in medieval Poland, for instance) to experiment with difficult technological innovations. On the contrary, everything leads us to believe that if the response was weak, it was because the "challenge" of the natural environment then seemed insurmountable.¹⁸

If, however, we were now to fall into a geographical determinism, giving it the quality of inevitability, that would no doubt be going too far. The African continent was the only one to undergo such a long drawn-out demographic stagnation (the population fell to 95 million in 1750 and remained at that level for another century), while the population of China tripled from 1600 to 1850, reaching at least 350 million, that of Western Europe increased considerably despite the general drop in the seventeenth century (when the figures for the French population once more became what they had been in the thirteenth century), and the population of India grew from 100 to nearly 150 million in the same period.¹⁹ To explain these figures we must seek further. It is in this context that we should assess the significance of the controversy concerning the demographic implications of another phenomenon which—is it coincidence?—is also peculiar to sub-Saharan Africa: the slave trade.