

ADVANCED READING

PASSAGE 1

Desertification, the creation of desert-like conditions where none had existed before, is the result of the vagaries of weather and climate or the mismanagement of the land or, in most cases, some combination of both. Such ecological deterioration in the Sahel has been linked in several ways to the increased size of livestock herds. During the fifteen years preceding 1968, a period of extremely favorable rainfall, the pastoralists moved into the marginal regions in the north with relatively large herds. However, with the onset of a series of dry years beginning at the end of the rainy season in 1967, the pastoral populations found themselves overtaxing very marginal rangelands, with the result that the nomads viewed themselves as victims of a natural disaster. The mistaken idea that drought is an unexpected event has often been used to excuse the fact that long-range planning has failed to take rainfall variability into account. People blame the climate for agricultural failures in semiarid regions and make it a scapegoat for faulty population and agricultural policies.

Deterioration and ultimately desertification in the Sahel and in other ecosystems can be combated only if an ecologically realistic carrying capacity for the rangelands is determined. Although there appears to be widespread agreement that such a determination would be significant, there has been little agreement on how to make operational the concept of carrying capacity, defined as the amount of grazing stock that the pasture can support without deterioration of either the pasture or the stock. Should the carrying capacity be geared to the best, the average, or the poorest years? Which combination of statistical measures would be most meaningful for the planning of long-term development of rangelands? On which variables should such an assessment be based, vegetation, rainfall, soil, ground and surface water, or managerial capabilities? Such inconclusiveness within the scientific community, while understandable, creates confusion for the land managers, who often decide to take no action or who decide that all scientific suggestions are of equal weight and, therefore, indiscriminately choose any one of those suggested. Given the downward spiral of land deterioration, it becomes essential that an ecologically acceptable carrying capacity be established and enforced.

It will also be crucial that land managers know what statistical and quasi-statistical measures actually mean: no single number can adequately describe the climate regime of an arid or semiarid region. Land managers must supplement such terms as the "mean" with more informative statistical measures to characterize adequately the variability of the climate. The understanding of this high degree of variability will serve to remove one of the major obstacles to resolving the perennial problems of the Sahel and of other arid or semiarid regions. Yet if in the end neither service was the obvious victor, the principle of civilian dominance over the military clearly was. If there had ever been any danger that the United States military establishment might exploit, to the detriment of civilian control, the goodwill it enjoyed as a result of its victories in World War II, that danger disappeared in the interservice animosities engendered by the battle over unification..

PASSAGE 2

For years scholars have contrasted slavery in the United States and in Brazil, stimulated by the fact that racial patterns assumed such different aspects in the two countries after emancipation. Brazil never developed a system of rigid segregation of the sort that replaced slavery in the United States, and its racial system was fluid because its definition of race was based as much on characteristics such as economic status as on skin color. Until recently, the most persuasive explanation for these differences was that Portuguese institutions especially the Roman Catholic church and Roman civil law, promoted recognition of the slave's humanity. The English colonists, on the other hand, constructed their system of slavery out of whole cloth. There were simply no precedents in English common law, and separation of church and state barred Protestant clergy from the role that priests assumed in Brazil.

But the assumption that institutions alone could so powerfully affect the history of two raw and malleable frontier countries seems, on reexamination, untenable. Recent studies focus instead on a particular set of contrasting economic circumstances and demographic profiles at significant periods in the histories of the two countries. Persons of mixed race quickly appeared in both countries. In the United States they were considered to be Black, a social definition that was feasible because they were in the minority. In Brazil, it was not feasible. Though intermarriage was illegal in both countries, the laws were unenforceable in Brazil since Whites formed a small minority in an overwhelmingly Black population. Manumission for persons of mixed race was also easier in Brazil, particularly in the nineteenth century when in the United States it was hedged about with difficulties. Furthermore, a shortage of skilled workers in Brazil provided persons of mixed race with the opportunity to learn crafts and trades, even before general emancipation, whereas in the United States entry into these occupations was blocked by Whites sufficiently numerous to fill the posts. The consequence was the development in Brazil of a large class of persons of mixed race, proficient in skilled trades and crafts, who stood waiting as a community for freed slaves to join.

There should be no illusion that Brazilian society after emancipation was color-blind. Rather, the large population of persons of mixed race produced a racial system that included a third status, a bridge between the Black caste and the White, which could be traversed by means of economic or intellectual achievement, marriage, or racial heritage. The strict and sharp line between the races so characteristic of the United States in the years immediately after emancipation was simply absent. With the possible exception of New Orleans, no special "place" developed in the United States for persons of mixed race. Sad to say, every pressure of society worked to prevent their attaining anything approximating the economic and social position available to their counterparts in Brazil.

PASSAGE 3

The promise of finding long-term technological solutions to the problem of world food shortages seems difficult to fulfill. Many innovations that were once heavily supported and publicized, such as fish-protein concentrate and protein from algae grown on petroleum substrates, have since fallen by the wayside. The proposals themselves were technically feasible, but they proved to be economically unviable and to yield food products culturally unacceptable to their consumers. Recent innovations such as opaque-2 maize, Antarctic krill, and the wheat-rye hybrid triticale seem more promising, but it is too early to predict their ultimate fate.

One characteristic common to unsuccessful food innovations has been that, even with extensive government support, they often have not been technologically adapted or culturally acceptable to the people for whom they had been developed. A successful new technology, therefore, must fit the entire sociocultural system in which it is to find a place. Security of crop yield, practicality of storage, palatability, and costs are much more significant than had previously been realized by the advocates of new technologies. For example, the better protein quality in tortillas made from opaque-2 maize will be of only limited benefit to a family on the margin of subsistence if the new maize is not culturally acceptable or is more vulnerable to insects.

The adoption of new food technologies depends on more than these technical and cultural considerations; economic factors and governmental policies also strongly influence the ultimate success of any innovation. Economists in the Anglo-American tradition have taken the lead in investigating the economics of technological innovation. Although they exaggerate in claiming that profitability is the key factor guiding technical change—they completely disregard the substantial effects of culture—they are correct in stressing the importance of profits. Most technological innovations in agriculture can be fully used only by large landowners and are only adopted if these profit-oriented business people believe that the innovation will increase their incomes. Thus, innovations that carry high rewards for big agribusiness groups will be adopted even if they harm segments of the population and reduce the availability of food in a country. Further, should a new technology promise to alter substantially the profits and losses associated with any production system, those with economic power will strive to maintain and improve their own positions. Since large segments of the populations of many developing countries are close to the subsistence margin and essentially powerless, they tend to be the losers in this system unless they are aided by a government policy that takes into account the needs of all sectors of the economy. Therefore, although technical advances in food production and processing will perhaps be needed to ensure food availability, meeting food needs will depend much more on equalizing economic power among the various segments of the populations within the developing countries themselves.

PASSAGE 4

In Roman times, defeated enemies were generally put to death as criminals for having offended the emperor of Rome. In the Middle Ages, however, the practice of ransoming, or returning prisoners in exchange for money, became common. Though some saw this custom as a step towards a more humane society, the primary reasons behind it were economic rather than humanitarian.

In those times, rulers had only a limited ability to raise taxes. They could neither force their subjects to fight nor pay them to do so. The promise of material compensation in the form of goods and ransom was therefore the only way of inducing combatants to participate in a war. In the Middle Ages, the predominant incentive for the individual soldier to participate in a war was the expectation of spoils. Although collecting ransom clearly brought financial gain, keeping a prisoner and arranging for his exchange had its costs. Consequently, several procedures were devised to reduce transaction costs.

One such device was a rule asserting that the prisoner had to assess his own value. This compelled the prisoner to establish a value without much distortion; indicating too low a value would increase the captive's chances of being killed, while indicating too high a value would either ruin him financially or create a prohibitively expensive ransom that would also result in death.

A second means of reducing costs was the practice of releasing a prisoner on his word of honor. This procedure was advantageous to both parties since the captor was relieved of the expense of keeping the prisoner while the captive had freedom of movement. The captor also benefited financially by having his captive raise the ransom himself. This "parole" was a viable practice since the released prisoner risked recapture or retaliation against his family. Moreover, in medieval society, breaking one's word had serious consequences. When, for example, King Francois I broke his word to the Emperor Charles V in 1525, his reputation suffered immensely.

A third method of reducing costs was the use of specialized institutions to establish contact between the two parties. Two types of institutions emerged: professional dealers who acted as brokers, and members of religious orders who acted as neutral intermediaries. Dealers advanced money for the ransom and charged interest on the loan. Two of the religious orders that became intermediaries were the Mercedarians and the Trinitarians, who between them arranged the ransom of nearly one million prisoners.