NINE FALLACIES OF NATURAL DISASTER:
The Case of the Sahel*

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Abstract. This article presents nine statements which are generally “accepted” as true. However, when they are applied to a particular situation, in this case the recent prolonged drought in the Sahelian zone in West Africa, they are as often untrue as they are true. For example, such generalizations as “people learn from their mistakes” or “when the rains come, everything will return to normal” or “technology is the answer”, when applied uncritically to a specific situation often prove to become part of the problem as well as a hindrance to the attainment of a solution to that problem.

It is strongly suggested that these nine generalizations, here called “fallacies”, be carefully assessed when applied, thereby removing one more obstacle in dealing with environmental problems in general and natural hazards in particular.

1. Introduction

This paper is concerned with misperceptions of the recent drought situation in the Sahelian zone in West Africa. The Sahelian drought is analyzed through a discussion of nine statements that are generally accepted as true. The statements, here called fallacies, are of questionable value when applied to specific situations. It is suggested that the application of these fallacies to this drought tends to hinder rather than foster an understanding of the difficulties involved in any post-drought recovery program.

The paper is also intended to make the reader question these generalizations and others like them. In the long run, the unchallenged acceptance of such statements tends to confuse drought-related issues rather than to clarify them. Such generalizations, when applied uncritically to specific situations, not only fail to contribute toward a solution of the problem but often become part of the problem.

The title for this article was inspired by Howard Zinn, Disobedience and Democracy: Nine Fallacies on Law and Order (New York, Vintage Press, 1968).


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The Sudan-Sahelian zone in West Africa has been adversely affected to varying degrees since 1968 by a major reduction in precipitation:

The severity of the drought [in this region] was primarily a function of latitude. Rainfall during the period 1968–72 was in fact considerably above normal along the Guinea coast and decreased to 60% below normal along the desert fringe. . . . Inclusion of 1973 data . . . merely increases the predominantly north-south differences. [1]

A debate concerning the probable causes for this extended drought has emerged in which the antagonists fall into two distinct camps. One group strongly suggests that the current drought is the result of a global cooling trend in the mid-latitude region in the northern hemisphere. As the polar-equator temperature gradient increases (that is, as the polar temperature decreases or as the tropical temperature increases) the westerlies become stronger and tend to suppress the monsoons that carry the precipitation on which annual crops in the region are dependent.

The other group contends that the current drought is a result of random climatic fluctuations. Extended droughts in the Sahel occurred before the current one (for example, in 1910–14 and 1941–42), [2] but they were interspersed with extended wet periods; droughts in the region are to be expected, as are favorable wet periods. This group concludes that there is not enough evidence at present to indicate that the current drought in the Sahel is part of a global climate change.

Taking a neutral position between these contending views, the World Meteorological Organization recently reported:

The unusually widespread reports of abnormal weather in recent years are more than a reflection of current wider dissemination of news. Their number and some apparent correlation between them point to at least a temporary climatic fluctuation which may be global. [3]

Concerning sub-Saharan Africa it was also noted that

Analysis of data on climate, river flow and lake level over the past 100 years have brought to light no real indication of a one-way trend which would point to a long-term change being of current importance. [4]

The two factions, however, do agree on two basic points. First, climatic fluctuations are normal to the region, and in any event the region will continue to be faced with occasional periods of prolonged drought. The other basic point is the realization that human agricultural and livestock grazing practices have had a negative impact on the ecologically fragile Sudan-Sahelian zone. Evidence has shown that the human input into the process of desertification has been a major one. Desertification (also referred to as desertization) has generally been defined as "the spread of desert-like conditions in arid and semi-arid areas, due to man's influence or to climatic change." [5]

Whatever the underlying cause (or causes) of the drought in the Sahel, it has been widely acknowledged that the impact of the harmful climatic fluctuations has, at the least, been greatly exacerbated by human misuse of the land in this region.
2. Fallacy 1: People Learn from Their Mistakes

In a recent article in *Science*, Nicholas Wade wrote:

the primary cause of the desertification is man, and the desert in the Sahel is not so much a natural expansion of the Sahara but is being formed *in situ* under the impact of human activity. [6]

This view, recently reiterated in the proceedings of several conferences, [7] has been referred to for several decades and, as Wolf Roder noted, had some currency even in Biblical times. [8] Twentieth-century scientists and ecologists have been trying to get this viewpoint across to political decision makers. E. P. Stebbing, for example, wrote several articles in the 1930s on the nature of human impact along the southern edge of the Sahara. He used such provocative titles as 'The Encroaching Sahara . . . ' (1935), 'The Threat of the Sahara' (1937), and 'Man-Made Desert in Africa' (1938). "In spite of the scantiness of the vegetation", wrote Stebbing in 1935, "great herds and flocks were seen and the scrub forest and the grass is burnt, great fires crossing the countryside. Overgrazing and hacking in the forest that is left, annual burning, and sand invasion suggest the question: How long before the desert supervenes?" [9] In 1935 he observed, "It is curious to realize that up in this region the population is actually increasing whilst the means of supporting it are obviously and visibly decreasing." [10] And further, "But the end is obvious: total annihilation of vegetation and the disappearance of man and beast from the overwhelmed locality." [11]

More recently, J. L. Cloudsley-Thompson concluded:

The extension of the desert into tropical Africa is primarily due to the deliberate action of man, in many instances within living memory. Desert encroaches over steppe, steppe over savanna, and savanna over forest. Thus the increase of the Sahara in recent years is part of a man-made, large scale, shift of the vegetation belts. [12]

Human destruction of the ecological balance along the fringes of deserts has not been restricted to the southern fringe of the Sahara. For example, a South African Senate report issued in 1914 (at the end of the 1910–14 drought) blamed the soil desiccation problem in South Africa on land misuse. [13]

Similar observations were made in Rhodesia in 1967 by an agricultural officer:

The degradation of vegetation and of soil as a consequence of overstocking and mis-management of veld grazing reaches its nadir in Rhodesia in Natural Regions 4 and 5 . . . The reason for the advanced stage of demudation reached in this area is ascribed primarily to the type of utilization, involving overstocking and mismanagement, and secondarily drought which has added to the effects produced by wrong utilization and has greatly accelerated the process of degradation. [14]

It should be noted that the Rhodesian situation is a political and racial one in which the Native Land Husbandry Act (1951) subdivided Southern Rhodesia into halves. The white minority government ‘gave’ the African population of 2.5 million about 42 million acres for agricultural settlement, whereas the white population of 207 000 (70% of whom were
urban dwellers) was given about 48 million acres of the best land. For the most part, African lands were considered "unfit for agricultural settlement because of broken terrain, poor soils, lack of water and tsetse infestation." [15]

As a final example, Chu Co-ching (also spelled Chu Ko-chen), in his 1931 article about desertification in China, concluded:

The invasion of sand dunes into regions around Yuling Fu is primarily due to man-made factors, owing to the extensive cultivation of steppes beyond the Great Wall, which began 200 years ago, and now extends to 50 kilometers beyond the Great Wall. [16]

The preceding examples show that different governments have been aware of the negative impact that man has had on his environment, especially in semiarid zones. Historical evidence, however, tends to indicate that individuals, as well as governments, do not necessarily learn from past mistakes either directly or by analogy. Many of the proposals suggested in response to the drought crisis in the Sahel today are similar to those suggested 60 years ago, for example, in South Africa. The South African Senate report alluded to earlier, urging that attention be given to such destructive land management practices as erosion, overgrazing, misuse of water, grass burning, and deforestation, was issued in 1914. The Chinese comment on desertification was written in 1931, and the one on Rhodesia in 1967. An awareness of the problems faced by governments in semiarid zones is, therefore, geographically as well as chronologically widely distributed.

Awareness of the problems, however, is not necessarily translated into action that will rectify those problems. The complexity of the problem was recently suggested by an official from a major donor country who had interviewed a Fulani herder in northern Upper Volta in the spring of 1973. He reported that the herder, asked how he had been affected by recent drought, said he had had 100 head of cattle and had lost 50. The herder continued, "Next time I will have 200", implying that by starting with twice as many he would save the 100 cattle that he wants. Yet the land's carrying capacity is such that he will still have only 50 cattle, but his loss will have been much greater.

A recent article suggested that in some countries there may be an official ambivalence toward dealing with the known problems of land mismanagement, population growth, and overgrazing; the article also noted that decisions are needed on such problems as:

(1) Whether it would be useful to restore the livestock herd to its pre-drought size, and, through its grazing, threaten the fragile ecology of the more marginal region once more.

(2) How to solve the dilemma of the goat . . . Such matters are being considered more actively by foreigners than by national leaders. [17]

A misleading feature of drought is that, following such a natural disaster, the population (human and livestock) is greatly reduced because of drought-related deaths or migrations. The land's carrying capacity will then be relatively more in balance with the drought-reduced populations that the land will have to support. What will have changed
for the worse, however, will be the rejuvenative capacity of the land. One must ask, as Stebbing did in 1935, “How long before the desert supervenes?”

3. Fallacy 2: Things Will Have to Change

People fear change. Eric Hoffer wrote about this theme in *Ordeal of Change*:

Back in 1936 I spent a good part of the year picking peas. I started out in January in the Imperial Valley and drifted northward, picking peas as they ripened, until I picked the last peas of the season, in June, around Tracy. Then I shifted all the way to Lake County, where for the first time I was going to pick string beans. And I still remember how hesitant I was that first morning as I was about to address myself to the string bean vines. Would I be able to pick beans? Even the change from peas to string beans had in it elements of fear.

In the case of drastic change the uneasiness is of course deeper and more lasting. [18]

There is a strong tendency for people to return to the known way of doing things, to return to ‘normal’. This is a feeling manifested by the Sahelian drought victims: nomads, sedentary farmers, herders, and Sahelian governments. Yet, one must ask, what options do they have? Each of the drought victims has only limited options. For example, four of the six Sahel states are listed among the poorest in the world. As for the sedentary farmers, they will want to return to the land in spite of the general awareness that the land is in need of a long post-drought fallow period. The options of the nomads are somewhat more restricted. They can migrate to urban (sometimes called pseudo-urban) centers within their own countries or in neighboring countries, or they can turn to a new but uncertain way of life as sedentary farmers depending on land availability. However, to the nomads these options are filled with the risks and fears of an unknown future. Their only real options are, in fact, a return to a subsistence way of life as nomads or to a less-than-subsistence way of life as refugees in a camp or as migrants in a city slum. Such options are apparently perceived as offering no favorable alternatives to returning to the known way of life. Things apparently do not have to change. They have to be made to change.

4. Fallacy 3: Nomads Want to Be Nomads

Nicholas Wade, commenting on social change in the Sahel, wrote: “unfortunately, there is no way short of a major social upheaval, that the nomads will consent to reduce their herds.” [19]

What Wade failed to realize is that a major social upheaval is exactly what the nomads in the Sahel have, in fact, been subjected to. They have been forced to do things they would not have done in ‘normal’ times. They have been forced to seek refuge in parts of the Sahel unfamiliar to them. They have been forced to sell off their herds. They have been forced to live in refugee centers.

At the recent Conference on Grazing in the Sahel held in Mali, C. F. Hemming stated: “The life of the nomad is an extremely hard one and there is little to suggest that he is unwilling to give up this hard way of life if an alternative is available.” [20]
Reports from other sources indicate that at least some nomads in refugee camps did not plan to return to their former homeland. A Center for Disease Control report issued in the spring of 1974 recorded that results of an interesting survey conducted among a group of displaced nomads indicated that 66% of those interviewed stated they would remain in or near the cities even if they had animals again. [21]

These two points, among others such as the selling of herds and the decision by some nomads not to return to their home country, suggest that there may be an interest among nomads for what they perceive to be a better, or at least a different, way of life. Perhaps it is now, during this crisis (a time of great social upheaval), that the nomads could be persuaded to consider options other than the perennial ones of a subsistence way of life (as nomads in normal times) and the less-than-subsistence way (as refugees in camps).

The Somali government (in northeast Africa) has taken advantage of their drought situation to present its nomads with new options:

Dislocations caused by the drought and famine besetting Somalia have been seized upon by the governing military council to speed up a timetable for resettling nomads... Somali spokesmen prefer to see the resettlement plans... as the natural response to the disaster. [22]

It is now that nomads as well as displaced farmers and herders of the Sahel should be most receptive to lessons, for example, pertaining to the necessity of and requirements for ecological balance in the Sahel. For nomads, education might involve such important matters as the necessity for herd size restriction, whereas for farmers it might involve improved land management discussions. Somalia faces similar problems today:

The efficiently organized [Somali] refugee camps were used not only to keep people alive and healthy but to indoctrinate them in the principles of the scientific socialism that is national policy... and to train them for new lives. [23]

The refugees were also taught to read and to write, while in the camps.

Apparently some nomads have not been reluctant to make changes when their options have been reduced—in this case by a natural disaster. Perhaps they would not be reluctant to consider changes in their traditional way of life if the options made available by their governments were to be improved. As Hemming noted,

the key to this problem may lie in the answer to the question: What can be done in this predominantly grazing area which will provide alternative jobs and which will, in the long run, enable the improvement of the rangelands and subsequently their maintenance at a high productive level? [24]

5. Fallacy 4: When the Rains Come, Everything Will Return to Normal

In reference to the Sahelian states (Mali, Mauritania, Upper Volta, Chad, Niger, and Senegal), what is meant by ‘normal’? On this point a journalist wrote:
For the villagers the end of drought, if the rains of this autumn (1974) return next year and the year after, means a return to normal life – on the edge of hunger, consistently malnourished, beset by malaria and hookworm and other parasites, having average life spans that fall short of forty years. [25]

Recall that four of the six Sahelian states are listed among the poorest in the world, with per capita incomes less than $100 year and with food production falling behind population growth. Malnutrition is widespread in the Sahel as well as in the rest of Africa, although the levels vary between countries, between regions, and between ethnic groups. In this respect, therefore, a return to normal means a return to a lesser level of malnutrition, that is, a continuation of malnutrition but at a more acceptable level. During abnormal times, malnutrition problems faced by the aged and the young are compounded: “During times of food scarcity, certain customs of West Africa culture may dictate that children receive less than their proportionate share of food” and are at a greater risk than adults to the effects of nutritional deprivation. [26]

Normal also means a return to pre-crisis political and social cleavages within the Sahel as well as with the Sahelian states: government versus nomadic populations, pastoralists versus sedentary farmers, recipients versus donors, recipients versus recipients. For example, many nomads who migrated to neighboring countries have been reluctant to return to their country of origin, often citing reasons of official discrimination against them. [27] Evidence of such discrimination exists. It was reported that there had been discriminatory food distribution within some of the refugee camps, a distribution that tended to favor the sedentary farmers over the nomads. It also was reported that the nomads in the camps were suffering from higher levels of malnutrition than were others within the same camps. [28]

As an example of a political cleavage between a recipient and a donor state, in November 1974 President Tombalbaye of Chad cut off American food relief shipments because a New York Times reporter had exposed corruption in Tombalbaye's government. Is it likely that he would have done this if the rains had not returned to provide a relatively good harvest in 1974? Tombalbaye's unpopular government was eventually overthrown in mid-April 1975 in a popular military coup. [29]

Finally, one of the paradoxes of good news – that is, a return average or above average rainfall which is received as ‘normal’ – which is most difficult to accept is that with the return of near-normal rainfall, there will be a decrease of interest in the perennial problems faced by the inhabitants of the Sahel. [29a] As Randall Baker said:

There is . . . a great danger that when the rains come in the Sahel, and the millet grows again, then the ‘problem’ will be considered over until next time. [30]

6. Fallacy 5: Education Is the Answer

What do we mean by education? In the 1950’s and early 1960’s it was generally believed that, if the less developed countries (LDCs) wanted to develop, their populations would have to be formally educated. They would have to become formally literate. Yet it is
difficult to accept the general proposition that formal education will cure the ills of the LDCs. Government officials are educated, yet they often fail to come to terms with problems. Often, the rationality of their decisions is questionable. Why, for example, were relief trucks from the Nigerian coast stopped at the Chad border so that relief food could be transferred to Chad trucks? Why did some political leaders (as in Ethiopia) fail to acknowledge the extent or even the existence of drought in their countries?

On formal education, a recent U.S. Agency for International Development (USAID) report noted:

The legacy of education in Sahelian states has not left the countries particularly well equipped to address some of the key problems they face. Specifically, they still possess... overly formal education systems... ignoring for the most part the needs of the rural masses. [31]

It has been argued that traditional nomadic herding practices in the pre-colonial era were extremely rational, given the ecological system in which the nomads lived. As P. Lovejoy and S. Baier noted,

the Tuareg trade network and commercial infrastructure not only formed a link between the economies of desert and savanna but also provided a safety valve for the desert during droughts, particularly those lasting more than several years.

Also,

the desert [Central Sudan] played a unique role in the development of the savanna here, where integration enabled the desert sector to survive periods of crippling drought and to prosper in times of favorable weather. [32]

Yet it appears that the impact of colonialism and the establishment of borders (such as those in the Central Sudan, between northern Nigeria and Niger) along with a "redirection of overseas trade toward the coast" had a major impact on the viability of the desert-edge sector and on the way of the life of the nomads. [33] Another major undertaking that tended to upset the nomadic way of living was the digging of boreholes or wells. In the short run the digging of boreholes tended to relieve drinking-water shortages. In the long run, however, nomads often kept their herds by the boreholes instead of migrating to other waterholes, and the herds would destroy the vegetative cover in the area by overgrazing and trampling. The end result, as cited in an FAO/SIDA (Swedish International Development Agency) report, noted: "the cause of the heavy mortality of stock in 1973 was lack of forage, much more than lack of (drinking) water." [34]

In terms of functional (nonformal) education, the traditional nomadic migration, or transhumance, was a rational and logical system, given the ecology of the area. Yet factors external to the nomads established new ground rules by which nomads had to live: restriction of herd movements, uncontrolled use of boreholes, pressures to settle. Commenting on the value of the traditional nomadic way of life, a recent USAID report suggested that the only cost/effective and realistic approach to this critical problem is to recreate the
necessary environment to permit the traditional management systems, with some improvements and adaptations to again function. [35]

What is needed is nonformal education. That is, education that "can be adapted to meet the practical aspects of the African Traditional Society." [35a] Also needed are reason and logic applied to questions relating to the ecosystem and man's impact on it. Reason and logic imply that the consequences of one's short, intermediate, and long term impact on the ecosystem will be looked at, thereby avoiding shortsighted decisions (such as the indiscriminate boring of wells).

In addition, continuing education would have to be undertaken so that individuals will not be permitted to neglect negative consequences of their activities. In order to encourage someone "to fix the roof after the rains have stopped", one must continually be reminded of what it was like while it was raining. On this point Garrett Hardin has written, "Education can counteract the natural tendency to do the wrong thing, but the inexorable succession of generations requires that the basis for this knowledge be constantly refreshed." [36]

7. Fallacy 6: Solutions Can Be Undertaken on a Piecemeal Basis (and Sequentially)

The problems associated with desertification in the Sahel must be viewed systematically. Dealing with one problem in one place at one time may only serve to exacerbate other problems in other places at later times. A United Nations Food and Agricultural (FAO) report noted:

It is also easy to see how reduction or destruction of vegetation in one part of a nomad's yearly travels could have disastrous consequences on other parts of the range, on the animals and on the existence of nomadism itself. [37]

In addition, looking within the Sahel for solutions to current Sahelian problems might foreclose the successful resolution of those problems. The problems faced by Sahelian states (four of which are land-locked) are numerous, but one step toward their resolution is the awareness that their problems are regional West African ones in that there exists an interrelationship between the Sahel states and their coastal neighbors as well as among the Sahelian states. On this point, a USAID report has stated:

Africans and donors alike recognize that more planning efforts are needed if the problems of the drought stricken Sahel are to be eased. This planning must take into account the relationships between the arid and semiarid lands of the Sahel itself and the wetter, generally more productive countries to the south. [38]

Technical examples of the need for a systematic approach are plentiful. An FAO report succinctly stated a view supporting a systematic approach:

It is true that, by putting down boreholes or making dams or conserving water by other means, it is possible to make water available to stock which could doubtless survive for a time if water were in fact the only limiting factor. However, as people in the African countries bordering the Sahara are well
aware, making water available simply allows animals to exist long enough to destroy the remaining vegetation which depends on rainfall. This artificial condition of over-stocking cannot last for long, and the animals inevitably decline in condition and eventually have to be removed from the so-called drought areas, once the basic vegetation has been removed. [39]

In light of all this, "France is considering new assistance programs for well drilling in West Africa." [40]

At the end of the current drought the Sahel will function again as an ecosystem, in part because of the return of the rains and in part because the population, human and livestock, which had been overtaxing the land, will have been brought into a relatively improved balance with respect to the land's carrying capacity. A recent USAID report confirmed this view:

National herds, which may have been reduced to as little as half their pre-drought size, are presently thriving on abundant grass and water and are apparently in much better ecological balance with the environment. [41]

Unfortunately, this balance will have been achieved by drought-related deaths and drought-related migrations — nature's means of control. Yet the underlying causes for the destruction of land bordering the desert region will remain: fluctuating precipitation patterns and land mismanagement practices. The activities of the inhabitants will again tend to reduce the resiliency of the land, which in turn will subject future generations of inhabitants to further droughts, the impacts of which will be relatively more devastating. On this important point W. C. Sherbrooke and P. Paylor have written:

we have also focussed [our study] on climate fluctuation, short term weather patterns induced by uncertain rainfall and followed by cyclic droughts from which marginal areas may not recover if subjected to continued attempts at intensive use that cannot be sustained by a dry year or a succession of dry years. [42]

It seems that, after several downward spirals of drought and less-than-perfect recovery, a functional approach to these problems cannot succeed. The only approach is a systematic one, and such problems as deforestation, grass burning, erosion, overgrazing, overstocking, population growth, water resource mismanagement, and the like must be looked at systematically.

Randall Baker proposed that

[it was most essential] to try and get the message across to donor agencies, multilateral agencies and recipient governments so that some structure of integrated regional planning or coordination of effort will ensure an holistic approach to change in pastoral areas. [43]

8. Fallacy 7: Political Leaders Say What They Mean

Not all political leaders say what they mean. A good example recently was supplied by the recently overthrown President Tombalbaye of Chad. When corruption in his administration had been exposed by New York Times reporter Henry Kamm,
Tombalbaye said that if he had to take insults in order to get American aid, then he would not eat. [44] What did he really mean? In the terms used in transactional analysis, he was saying that if American reporters continued to expose corruption in his government (corruption in which his wife was implicated), then he would cut off relief food shipments to his people and, therefore, his people would not eat; to be sure he would eat. American assistance was ended by the Chad government as a result of the incident. This followed his termination of West German relief assistance.

Ethiopia, too, demonstrates official neglect of drought victims. [45] Government leaders at first ignored and later failed to acknowledge the existence and scope of the drought, the famine, or the deaths associated with this natural disaster. [45a] Some leaders who had proclaimed concern for their people’s welfare while ignoring their plight, such as those in Ethiopia, Chad, and Niger, have been overthrown by military coups.

Finally, it remains to be seen if the Sahelian states, which have pledged to work together to cope with the impact of the drought, will continue to do so, especially after the rains have returned to normal. On this point Mohamed El-Khawas has written:

it appears that the Sahel governments are still reluctant to work together in a joint regional development plan despite public pronouncements regarding their readiness to work collectively on the drought problems. Even though interregional committees and commissions have been created there is no evidence of increased cooperation among the Sahel governments. [46]

In fact, it is now, with the return of the rains, that the leaders of these states should devote more attention to the underlying causes of the desertification process by which their states’ viability and resource base are threatened.

9. Fallacy 8: The Myth of Interdependence

Before discussing national interdependence, one must distinguish between what is and what ought to be E. H. Carr, in Twenty Year’s Crisis, discussed at length the differences between the realist view (what is) and the utopian view (what ought to be) of international relations. [47] It is important and useful to keep this distinction in mind, especially when talking about humanitarian assistance and national interdependence.

An example of the utopian or what-ought-to-be school is the following statement by Lester Brown:

when one inventories the many kinds of ties now existing among nations, one begins to appreciate how rapidly our daily well-being is becoming irrevocably dependent on the resources and cooperation of other nations. [48]

About what ties is he writing? Are these ties more or less important than areas in which ties do not now exist? Is dependence — economic, political, military — irrevocable? What are the motives behind such ties? [48a] In light of the view of the primacy of politics, which contends that political decisions form the basis for decision in other sectors, the irrevocability of dependence is not in fact a valid proposition. For example, in the 1960’s
Modibo Keita, then president of Mali, destroyed his nation's only rail link to the coast at Dakar, Senegal, because of a politico-ideological confrontation with Senegal's leader, Leopold Senghor.

Cynthia Enlow has written that development as currently conceived is entangling recently decolonized nations in new webs of dependency. Their citizens are learning preferences for foreign styles. Their economies rely on influences of foreign capital and technology; their currencies are affected by an international monetary system they cannot control. [48b].

What is meant by dependence - simply two states interacting with each other? Prime Minister Pierre Trudeau of Canada once mentioned that being a neighbor of the United States was like sleeping in bed with an elephant, meaning that Canadian relations with the United States involved dependence and not interdependence. There is a difference between the two. Another example is U.S. Secretary of State Henry Kissinger's threat about an eventual invasion of the Mideast oil fields if the Arab pricing policy was no longer tolerable to the United States. Interdependence accepted only up to a point is not interdependence but dependence. Is it obvious, then, that one should expect the developed nations (either the major powers or the rich nations) to provide humanitarian aid to the developing countries or even to at-risk populations whose lives have been adversely affected by either natural or manmade disasters?

States apparently operate in their own national interest. Leaders make decisions intended to yield a payoff for their country. Humanitarian issues have only a relatively small input into their decision-making process.

U.S. Secretary of Agriculture Earl Butz recently let it be known that food for export was an important tool in the international negotiations kit. [49] This becomes obvious when one notes that in 1974 the pro-U.S. regimes of South Vietnam and Cambodia received 50% of U.S. food aid dollars while the six Sahelian states received about 12%. [50] “This is not a new practice, however. During the 1960’s food aid was used to help South Korea finance its troop commitment in South Vietnam.” [51] The Americans intend to use their food as a tool for influence as the OPEC (Oil Producing and Exporting Countries) nations use their oil against the developing as well as the developed countries. What has the oil cartel done to help the poorest countries? Last December [1974] it was estimated that the oil cartel had committed some $9.5 billion in development aid to the developing world during 1974, and disbursed about $2.6 billion... In giving this aid the oil producing countries show a strong preference for the Moslem World. [52]

More than 74.4% went to Islamic nations, 3.7% to India, and 2.8% to all of black Africa. [53] This is the global system as it is, even though there exist differing views on how it ought to be. The harmony-of-interest concept referred to by Carr is currently interpreted as meaning that what is good for my country will be good for the global community. [54] Utopians or idealists should interpret this concept as meaning what is good for the global community will be good for my country.

There is, as Kenneth Waltz has written, a relatively low level of interdependence between most states. [55] To assert that there is a high level of national interdependence
is to overlook that there also is a high level of noninterdependence. Misperception of the existing level of interdependence can lead to a crisis of expectations in that one would tend to match the actions of other states against this myth qua standard of interdependence.

States have linkages. The existence of such linkages indicates that states interact with one another but has no connotations of direction or degree of dependence. Major powers do not necessarily accept that they have obligations to render assistance, for example, to the drought victims in the Sahel. Some states give assistance but often they do so for less than altruistic reasons, as recently noted by Tom Wicker, who wrote that “the United States now is using its surplus food more nearly for international political purposes than for humanitarian assistance.” He added that over half of the $1 billion Food for Peace Program was going to countries like South Vietnam, Cambodia, and Chile, none of which was acutely threatened by hunger. [56]

One should therefore question the belief that there exists an interdependent international order. The basic actor in the international political system is still the state.

10. Fallacy 9: Technology Is the Answer

Because technology is neutral, technological developments can have an unfavorable as well as a favorable impact on society. In the Sahel, for example, technology can be used to dig deep wells to make water available for human and livestock consumption. As noted under Fallacy 5, however, wells in the Sahel often have led to situations in which water no longer was the limiting factor but vegetation near the water hole was.

Medical technology can be used to keep people and livestock alive longer in better health. Yet doing so would eventually mean an increase in population pressure on the land’s carrying capacity. In addition, these surplus populations would drift further into the northern edge of the Sahel, the more marginal areas. Such population pressures in a climatologically marginal zone that is subjected to extreme climatic fluctuations would doom the herders as well as their herds to famine in times of drought.

Other technological breakthroughs, for example, would be irrigation construction and miracle grain development or protein enhancement of existing grains. Yet even these developments have their drawbacks. Technology is neutral. But its implications — social, economic, political, ecological — are not. Therefore, the implications of technological development must be assessed before the development is implemented, so that the downstream impact (unexpected side effects) of such developments might be pinpointed and prepared for. Failure to undertake technology assessments may lead to situations in which temporary gains through technology can lead to long-term losses of a more permanent nature. The problem is that

the man who drills wells [is not taught to] . . . ask what will happen to all the animals which survive as a result of his activities any more than a doctor working in the Tropics questions the future of all the extra babies he is adding to the population problem. [57]

Kenneth Boulding commented on the potential dangers of technology when he wrote
about his 'dismal theorem'. *In The Meaning of the Twentieth Century* he stated:

there is a famous theorem in economics, one which I call the dismal theorem, which states that if the only thing which can check the growth of population is starvation and misery, then the population will grow until it is sufficiently miserable and starving to check its growth. There is a second, even worse theorem which I call the utterly dismal theorem. This says that if the only thing which can check the growth of population is starvation and misery, then the ultimate result of any technological improvement is to enable a larger number of people to live in misery than before and hence to increase the total sum of human misery. [58]

### 11. Conclusion: Where There’s a Will, There’s a Way

Like the preceding nine generalizations, "Where there’s a will, there’s a way" could also be considered a fallacy. One might argue that sometimes when the will exists the way does not. For example, the Sahelian region is vast in area but relatively sparse in population. Therefore, in terms of cost-benefit or priorities analyses, it may prove too costly to rectify the problems that plague the inhabitants of the Sahel. Whether the solution is the costly construction of a tree belt across the Sahel, or an extensive irrigation project, or even the resettlement of the nomadic population, the will to deal with some of these problems may exist but the way (i.e., resources, commitments) may not.

On the other hand, after studying the Sahelian drought it becomes clear that ways of dealing with several of the drought-related problems are known. For example, there are known solutions for such problems as overgrazing, overpopulation (both human and livestock), indiscriminate drilling and uncontrolled use of wells, deforestation, and other similarly destructive land management practices. Yet for one reason or another — political expediency, lack of resources, lack of concern — the will of governments to cope with these pressing perennial problems of the Sahel surfaces only intermittently. Their will is strong when a crisis is new but fades as the crisis continues in time, especially when it becomes clear that solutions required to deal effectively with the problems are often difficult to implement and not without sacrifice on the part of the recipient and donor states. Overshadowing this thought is the paradoxical nature of good news. When the rains return to 'normal', interest in resolving the perennial problems in the Sahel will diminish.

### Notes and References


[8] Wolf Roder, Department of Geography, University of Cincinnati, comments during the African Studies Association meeting, Chicago, 1974, panel on 'Climate Change and the Future of the Sahel'.


[23] Ibid.


[34] Quoted in Rapp, A Review of Desertization, p. 48; see also the graphs depicting the relationship between the spacing of wells and overgrazing, p. 47.
[38] USAID, ‘Briefing’, Table 6, p. 6.
[49] Quoted in Peter Wiley, U.S. Food Policy Based on Profit, Politics, Colorado Daily (University of Colorado, Boulder), March 31, 1974, p. 3.
[50] Ibid.
[51] Ibid.
[53] Ibid.
[54] Carr, Twenty Years’ Crisis, pp. 41–62, 80–85.

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