

## MURSI RESPONSE TO DROUGHT: SOME LESSONS FOR RELIEF AND REHABILITATION

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THE FAMINE NOW affecting Ethiopia is probably the worst in the history of Africa, and yet it has come only ten years after an earlier famine which galvanised both national and international relief and rehabilitation efforts on an unprecedented scale. In answer to the inevitable question 'What went wrong?' there has arisen a chorus of accusations, from politicians, relief agency staff, academics and journalists, each pointing the finger of blame in any direction but their own. In this article I want to resist, as far as possible, the temptation to ask who is to blame and ask instead what lessons can be learnt from the present disaster which might help to prevent its otherwise inevitable recurrence. To answer this question I draw upon my experience, as an anthropologist, of a part of Ethiopia which has seen, since 1971, its worst drought and famine in living memory which has not been affected by any large-scale or sustained relief and rehabilitation programme.

If anthropology has any practical contribution to make towards solving the problem of famine, at least part of this contribution must lie in showing how complex is the relationship between a particular set of environmental circumstances and the culture of a particular community. For one cannot know the extent of an environmental crisis (or even that one exists), nor appreciate the likely consequences of a particular intervention, without appreciating the role of culture, both in determining what particular combination of circumstances constitutes a crisis, and in governing a people's response to it. Culture, in other words, is not a mere object, acted upon by nature, but a subject which constitutes or gives meaning to nature. One way of showing this would be to describe the history of a particular relief or rehabilitation programme and to show how it failed to achieve its objectives and/or led to unintended and undesired consequences, because the cultural complexities of the situation were not adequately understood. Another, and for obvious reasons, less common way is to show how a particular people have responded, in the absence of outside attempts to sustain or change their way of life, to ecological pressures which have pushed them close to the limits of their adaptive capacity. It is a case of this kind that I present here.

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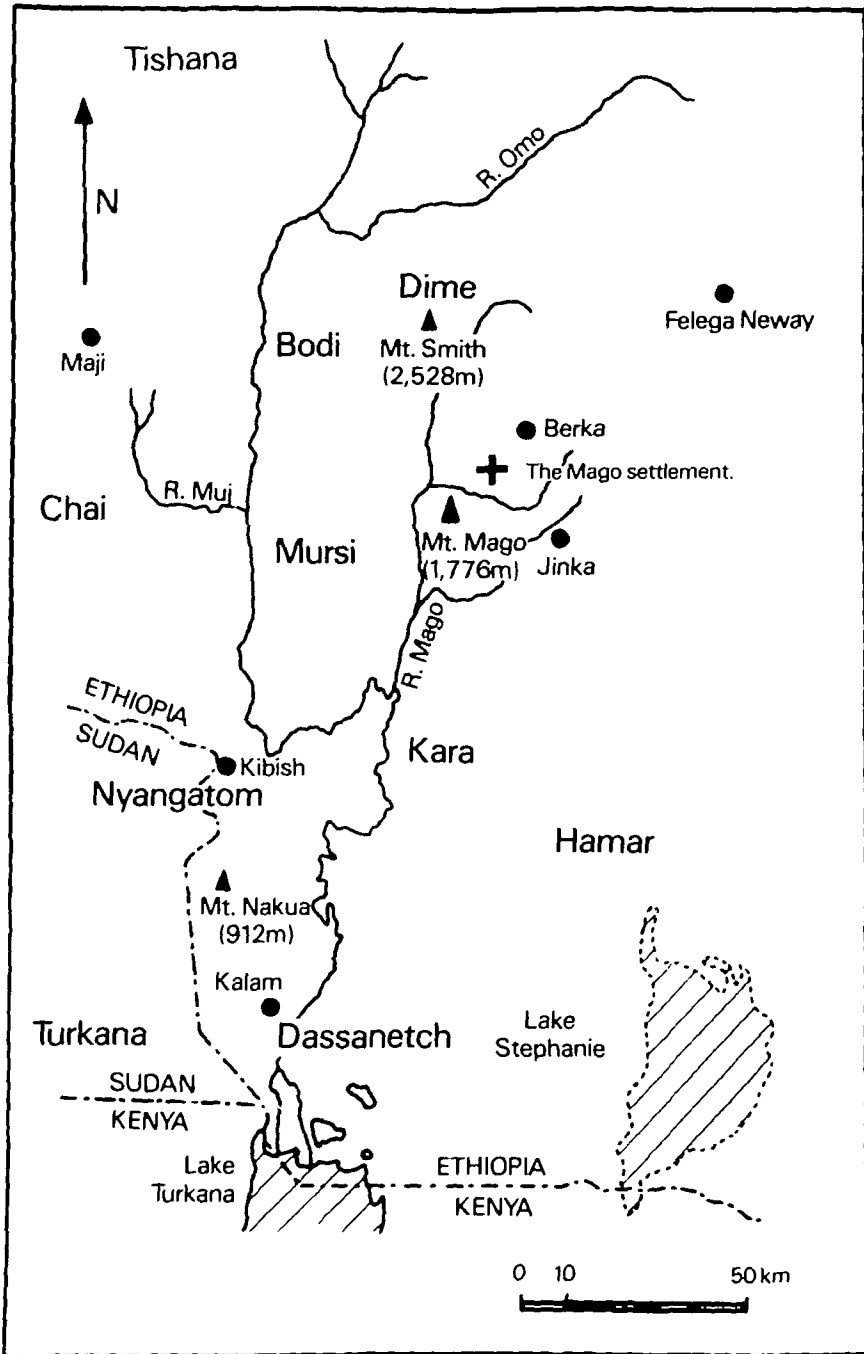
*The early 1970s*

The Mursi number about five thousand and live in the Lower Omo Valley of southwestern Ethiopia, sixty miles north of Lake Turkana. Their economy is based upon the integration of three main subsistence activities, rain-fed cultivation, flood-retreat cultivation and cattle herding. None of these is sufficient in itself, nor even in combination with one of the other two, to provide a regular and reliable subsistence, but each makes a vital contribution to the overall viability of the economy. To understand the different and complementary constraints which affect the exploitation of these three productive resources is to understand the adaptive success of the Mursi economy and the extremity of the conditions which have brought it, in recent years, close to the point of collapse.

There is no shortage of land for rain-fed cultivation, but rainfall is both low (an annual mean of around 400 mm) and, more to the point, highly unreliable in occurrence, distribution and intensity. If there is a sufficiently heavy and prolonged fall of rain in March or early April, sorghum (the main crop) will ripen in ten weeks and will be ready for harvesting in twelve. If the rain is even a few weeks late, the crop may not have enough time to reach maturity before it is destroyed by a prolonged spell of hot dry weather in July and August. Always eager, for this reason, to get their seed into the ground as soon as possible, the cultivators may misjudge the onset of the main rains, planting after a 'false alarm', only to find that a dry spell follows, leaving the seeds with insufficient moisture to germinate successfully. (It makes good 'scientific' sense to plant immediately after the first fall of rain, since the effect of this rain is to release, all of a sudden, the nutrients that have been stored in the soil during the dry season, making them available, at a high level, for seed germination). It is also possible for a promising harvest to be drastically reduced by a short burst of heavy rain a few weeks before the sorghum is ready to be cut.

Sorghum is also the main crop cultivated by means of flood-retreat cultivation. It is planted along the banks of the Omo as the flood recedes in September and October and harvested at the height of the dry season in November and December. Since only land which has actually been inundated can be cultivated by this method, and since the area liable to flooding is limited, along this stretch of the Omo, to small pockets and strips on the banks themselves, the potential harvest from flood-retreat cultivation is never as great as from rain cultivation. But since the fertility of flood land is annually renewed by the deposition of silt, and since the annual rise and fall of the Omo is controlled not by the erratic local rainfall but by the heavy 'summer rains' which fall over its highland catchment area, flood cultivation is far more reliable.

Although the Mursi are expert and energetic cultivators, their cultural values are overwhelmingly centred around cattle. Unless one is careful,



this may lead one to suppose that they are, as Evans-Pritchard describes the Nuer, 'pre-eminently pastoral'.<sup>1</sup> Like the Nuer, however, they are only this in the sense that their culture elevates cattle to a position of supreme symbolic importance. Having about one head of cattle per head of human population, which is not much less than E. E. Evans-Pritchard reports for the Nuer,<sup>2</sup> they would need at least ten times their present cattle wealth to subsist entirely on the products of their herds.<sup>3</sup> It may be safely estimated that they depend on cultivation for at least three quarters of their subsistence needs. This still leaves an important contribution to be made by cattle to daily subsistence—particularly to that of young children and unmarried men—but, as the events of the past thirteen years have dramatically shown, cattle are particularly important to the Mursi as a form of insurance against crop failure. They provide this insurance not, of course, by being consumed directly, but by being exchanged for grain—either in Mursiland itself or in the surrounding lowlands (where the localized rainfall may lead to wide variations in crop yields), or, when rainfall in the lowlands is universally poor, in highland villages, to the east of the Omo. It is presumably this, rather than the actual contribution made by cattle to daily subsistence, which has taught the Mursi to see their cattle as their last defence against starvation and which, in turn, makes it easy to understand the strength of their emotional attachment to them.

My first field trip to the Mursi (January 1969–December 1970) coincided with what they might well now consider the end of a Golden Age—an age of peace and relative plenty during which, despite occasionally poor years, adverse conditions never combined in such a way as to threaten seriously the essential complementarity of their three principal means of subsistence. It was evident, even during that first visit, that subsistence anxiety was a fact of Mursi life. But they themselves insisted that, although they were often hungry, no-one among them ever died of starvation. They told me a very different story when I returned, three years later, in November 1973. For during those three years they had suffered a famine of disastrous proportions, unprecedented in living memory. As I went through the census of 367 married men and their families which I had collected in 1970, I was given vivid and macabre accounts of people dying of starvation, committing suicide, abandoning their relatives and gorging themselves to death on meat and fish after weeks of hunger. Almost 20% of the married men alone in the census had died since 1970—not all of them, of course, from starvation. The death rate among young children—

1. E. E. Evans-Pritchard, *The Nuer* (Clarendon Press, Oxford, 1940), p. 16.

2. E. E. Evans-Pritchard, *Nuer* p. 20.

3. See L. H. Brown, 'The biology of pastoral man as a factor in conservation' in *Biological Conservation* 3 1971 (2) pp. 93–100; and G. Dahl and A. Hjort, *Having herds: pastoral herd growth and household economy*, Stockholm Studies in Social Anthropology No. 2, University of Stockholm 1976.

that section of the population which has the highest mortality rate at the best of times—must have been enormous.<sup>4</sup> What had brought about this disastrous situation?

The simple and largely correct answer is a failure of the rains for three years running (1971, 1972 and 1973), something which my informants had never experienced before, together with very low Omo flood levels over the same period. The consequent hunger helped to bring about and was, in turn, exacerbated by inter-group fighting on a large scale, which affected all the herding peoples of the Lower Omo during the early seventies.<sup>5</sup> The Mursi were chiefly involved in raiding and counter-raiding with their northern neighbours, the Bodi, with whom they had been on terms of peaceful co-operation since the early fifties. This increased the food shortage in a number of ways. Firstly, in order to make the cattle less vulnerable to Bodi raiders, the Mursi kept them well away from some of their best grazing areas in the north of their country and confined them instead to the eastern fringes of the tsetse infested Omo bushbelt. Secondly, they abandoned both raid-fed and flood-retreat cultivation areas in this border area. Thirdly, the hostilities affected communications with highlands markets, the only source of grain. People travelling to and from these markets were regularly ambushed and killed. It would be going much too far to say that warfare, by interrupting normal subsistence and trading activities, was the main cause of the food shortage, but there is no doubt that the Mursi were less able to deal with it than they would have been had their external relations, especially with the Bodi, been peaceful.

Apart from two isolated distributions of famine relief in September and December 1973, the Mursi received no outside assistance during the first and most disastrous three years of the 1970's. The single most important factor which enabled them, as a group, to survive this crisis, was undoubtedly access to grain through market exchange in the highlands. All manner of items were taken up to the highlands to be bartered or sold—rifles, agricultural implements, tobacco, hides, honey and even walking sticks. But, in their own estimation, it was the ability to exchange cattle for grain which differentiated, more than anything else, between those who survived and those who did not. So desperate were some people to obtain cattle for this purpose that they took back by force cattle they had paid in bridewealth, thereby divorcing themselves in the process. It is difficult to think of a more telling indication than this of the severe strain imposed by the famine on social relations. For the rights and

4. A more detailed account of the 1970-73 drought is given in my article 'Response to drought: the Mursi of southwest Ethiopia' in J. P. Garlick and R. W. J. Keay (eds.), *Human ecology in the tropics*, Taylor and Francis, (London 1977).

5. See the articles by Tornay, Almagor, Fukui, Turton and Todd in K. Fukui and D. Turton (eds.), *Warfare among East African herders*, Senri Ethnological Studies 3, National Museum of Ethnology, Osaka, 1979.

obligations arising out of bridewealth debt not only ramify among a wide variety of kin and affines but have a time depth of three generations. In 'normal' times, the system of reciprocity thus established plays a vital part in the equitable distribution of scarce resources<sup>6</sup> but so great was this crisis that, for some people at least, it was no longer possible to wait for reciprocity to be achieved in its own time. They therefore began turning their long term, intangible assets—claims on the property of others based upon past exchanges—into short term tangible ones. Having lost confidence in the natural order of things, they had lost confidence in the social order as well. Indeed, some people predicted that, since the rain appeared to have deserted their country for good, they would eventually have to do the same. By the time of my next visit to the Mursi, in April 1981, this prediction had been fulfilled.

### *The migration*

There was some improvement in the situation of the Mursi during the middle years of the decade, but the rains were again poor in 1977 and disastrously so during the two succeeding years. The resulting crop failures were as serious as those of the early seventies but this time their effect was mitigated by the first ever systematic distribution of famine relief to the Mursi, at a temporary distribution point set up during 1979 and 1980 on the east bank of the River Mago, a tributary of the Omo, by the Relief and Rehabilitation Commission of the new Ethiopian Military Government. Once the food had arrived by lorry at the distribution point, it was divided into individual loads and given out to all-comers who then carried it back to their home settlements. This procedure was presumably adopted out of sheer necessity, there being insufficient staff and equipment available to set up elaborate distribution centres of the 'soup kitchen' variety, but its benefits were obvious. First, the food was distributed with maximum speed, secondly, those most in need of it were not forced to make a long and potentially fatal journey to the distribution point and, thirdly, because they were not forced to remain at a feeding station to receive daily handouts, people were not taken away for long periods from their essential subsistence activities. Thus, there was not created an ever-growing settlement of 'refugees', permanently dependent on food aid, and it was precisely because such a 'famine camp' was not created that the way was left open for the Mursi to take their most drastic step so far to secure their long term future: a change from mobile semi-pastoralism to a permanently settled agricultural way of life.

In 1979 there began a spontaneous migration from northern Mursiland

6. See my article 'The economics of Mursi bridewealth' in J. Comaroff (ed.) *The meaning of marriage payments*, (Academic Press, New York), 1980.

to higher, better watered land in the Mago Valley—not, it must be stressed to the distribution point just mentioned but to an area further upstream, at the foot of Mt. Mago (1176 m) and in the rain shadow area of the steep eastern wall of the Omo rift. This place was chosen because it offered better opportunities for reliable rain-fed cultivation than the Omo lowlands and because of its proximity (four hours' walk) to a highland village, Berka, with a weekly market. Given the importance of market exchange in seeing the Mursi through the recent years of hunger, it can be well understood why the advantage of living so close to a highland market should have been considered only second in importance to the prospect of better cultivation as a reason for moving to the Mago Valley. There was, however, a major disadvantage: the area in which the migrants had settled was one of high tsetse challenge and this meant that there was little chance of keeping cattle in the vicinity of the settlement, except perhaps during the one or two driest months of the year. I gathered, in 1981, that a few migrants had taken their cattle with them, but that the majority were unwilling to take this risk, leaving them in the care of unmarried male relatives in the Omo lowlands, a full day's walk from the new settlement. It therefore seemed likely that, provided the hoped for agricultural potential of their new settlement was realised (and the 1979 and 1980 harvests had been markedly more successful than elsewhere in Mursiland), the migrants were in the process of becoming sedentary agriculturists, relying on rain-fed cultivation, and that they represented a 'sloughing off' of surplus individuals from the traditional subsistence economy. For they had not only reduced their dependence on pastoralism, but they had also given up their valuable flood-retreat cultivation areas on the banks of the Omo.

Together with my wife and son, I first visited the Mago settlement (as I shall call it) in August 1982. It consisted of over two hundred houses, spread out over an area of approximately one square mile, in six separate clusters. The migrants, who then totalled between eight hundred and one thousand, had just taken in a good harvest and were disposing of their surplus sorghum by selling it in Berka and by holding numerous beer parties. Relations with their highland neighbours and traditional enemies, the Ari, were good, despite the fact that the area taken over by the Mursi, although previously unoccupied, had long been used by the Ari as a source of honey—they place their beehives, or 'honey barrels', in the tall trees of the Mago forest. The two groups appeared to be accommodating to each other well through a thriving economic exchange (the Mursi selling sorghum and buying green vegetables, salt, coffee, earthenware pots, goatskins and alcohol) which was bringing the Mursi, for the first time in their history on a regular basis, into the cash economy. The one problem was the evident unsuitability of the area for cattle. Most of (and, a year later, when we visited the settlement again, all) the migrants had given up

any attempt to keep their cattle less than a full day's walk from the settlement. The problem confronting them was how to maintain a strong foothold in the pastoral economy without being able to play an active part in the day-to-day management of their herds. It seemed likely that in due course this would lead to their *de facto* exclusion from the pastoral economy, and although they were not prepared to admit that they had turned their backs on traditional pastoral values, this, from the point of view of those who had not migrated, is precisely what they *had* done. The situation seemed to contain all the necessary ingredients for the eventual creation of a new ethnic identity for the Mago migrants. In adapting themselves to a new pattern of subsistence and settlement they had put more than a geographical distance between themselves and their fellow Mursi of the Omo lowlands.

The commitment of the migrants to their new way of life, despite the difficulties of reconciling this commitment with traditional values, was nicely demonstrated by a series of events which occurred during our second and last visit to the Mago settlement, in August 1983.<sup>7</sup> The situation in the settlement then was rather different from what it had been a year earlier. The July harvest had been very poor (though better than elsewhere in Mursiland) due both to insufficient rain and to the particularly severe inroads made by birds into the crop before harvesting. The severity of the resulting hunger was clear from a survey of child nutrition carried out by my wife, which replicated a survey she had carried out a year earlier, in August 1982. In that year, out of 68 children under 110 cms in height who were measured, 15 (22%) were 'malnourished', having upper mid-arm circumferences of 13.5 cms or less. In 1983, 52 of 83 children measured (62%) came within this category. Hunting (of buffalo) and honey gathering were the chief means by which people were attempting to supplement their meagre grain supplies. Parties of men, women and children spent days on end in the bush, hunting and gathering, and buffalo hides and honey were sold in the highlands, the proceeds being used to buy grain at prices which had risen sharply since the year before. Once again, the importance of market exchange in coping with famine was demonstrated, but the very same conditions which, this year, made access to the market in Berka even more important to the Mursi, also threatened to deny it to them by causing a deterioration in their relations with the Ari.

The problem centred around the honey barrels of the Ari, from which some Mursi were stealing honey in order to sell it, back to the Ari, in Berka. The Mursi were also accused of stealing maize, coffee, axes, hoes and cloth from the highlanders' houses and farms as they went to and from

7. A fuller account is given in D. & P. Turton, 'Spontaneous resettlement after drought: an Ethiopian example' in *Disasters*, 8, No. 3, 1984.



the market. On Sunday the seventh of August 1983, a group of Mursi women were ambushed by a number of Ari as they made their way back to the settlement from the market. One woman's bag of maize was slashed open with a spear and the contents poured out. Over the course of the next three weeks the problem of how to contain this growing conflict was the subject of intense public discussions, which included the first ever visit by a formal deputation of Ari to the Mago settlement. It was in the interests of both sides to defuse the conflict as soon as possible. As far as the Mursi were concerned, their survival depended on maintaining access to Berka, which access could, in the last resort, be denied to them by the police, whom they see as the 'husband' of the Ari. The Ari on the other hand, for whom honey is a major source of the cash they need to pay their taxes and purchase trade goods, needed to maintain access to their honey barrels in the Mago Valley, where the writ of the police does not run.

Such were the pressures on both sides to reach a settlement that one was quickly achieved, despite the lack of a common language and shared cultural value and despite the deep distrust and hostility which traditionally exists between them. It was proposed by the Mursi, and agreed by the Ari, that in future any Mursi taking honey to market in Berka should be treated as a thief by the Ari and handed over to the police if he did not carry a letter stating where the honey had been gathered and confirming that it had not been taken from a honey barrel. This letter would be written by the only member of the Mago settlement who could read and write Amharic (a man who had learnt to do so while serving a two year prison sentence in Jinka) and it would be 'signed' by the ritual head or priest (*Komoru*) of the Mago settlement. This letter would be addressed to the headman of the nearest Ari village, who would give the bearer another letter to take on to Berka and show the police. This 'honey pass' system, began to operate while we were living in the settlement last year and appeared to be working well. I provided the necessary paper and pens, to start with, but a charge of twenty to thirty cents per pass was soon imposed to cover the cost of these materials which would subsequently have to be bought in Berka.

The discussions which led to this—for the Mursi at least—totally novel arrangement were of great interest because they showed the politically more influential members of the Mago settlement using their rhetoric to resolve for their audience the conflict between traditional values and the 'untraditional' behaviour represented by the migration. Their speeches were devoted, not to the dispassionate analysis of various possible courses of action, but to strengthening the commitment of the migrants to the new life they had chosen for themselves in the Mago Valley. The problem they were grappling with was how to legitimise and justify the migration, in terms of traditional values, despite the fact that it represented, to some

extent, a turning away from those values. When talking to the Ari deputation, on the other hand, they were quick to invoke the new, pan-Ethiopian values of the revolutionary government, with such phrases as 'We are all the children of Mengistu; now there are no Amhara, there are no Ari, there are no Mursi; we are all one'.

### *Relief and Rehabilitation*

The story I have told of Mursi response to drought is, in many ways, a success story. They have shown great resilience and resourcefulness in responding to ecological and political conditions so extreme that, in order to find their equal in this area, one would probably have to go back to the drought, human and animal pandemics and military turmoil of the 1890's. They have survived this experience with their social and economic institutions intact and with an undiminished sense of their own cultural identity. None of this, of course, should be surprising, but one is nevertheless led to ask whether a condition of this success has been the failure of outside agencies and authorities to come to their assistance with a full scale programme of relief and rehabilitation. A more systematic and prolonged distribution of emergency food could, for example, have saved many lives, especially those of young children, but, if it had been made in camps at which people were compelled to congregate for daily handouts, it could also have turned large numbers of, if not all, the Mursi into refugees in their own country. It might have saved lives at the cost of destroying a way of life, thereby helping to create famine in the future. I do not mean to imply that the Mursi were better off without a relief and rehabilitation programme, because I would not wish to weigh the suffering and deaths of individuals against the 'well being' of something as impersonal as a 'way of life'. But it is worth considering, not least for the sake of the Mursi themselves, whether their recent history contains any useful lessons for the policy and practice of relief and rehabilitation.

The problem of how to save lives, through the distribution of food aid, without destroying a way of life, obviously requires different solutions, depending upon the circumstances of each case. It is now widely recognized, however, that the aim in all cases should be to make as much use as possible of existing channels for the exchange and distribution of scarce resources—to 'enhance', as the jargon has it, 'indigenous coping mechanisms'. These mechanisms will, among a people such as the Mursi, be closely bound up with institutionalised behaviour of a kind which cannot be unambiguously labelled 'economic', it being a characteristic of such societies that economic institutions are not segregated from kinship, political and religious ones. If, therefore, the distribution of food at a time of extreme shortage is made to bypass the local distributive network, the effect will be to deprive many connected institutions of an important part of

their *raison d'être*. Food aid, if it is distributed through the channels which already exist for the allocation of scarce resources, can put new life, not only into the people themselves but also into their ailing social institutions. The Mursi were fortunate, therefore, that this was how the food that was brought to them by the RRC during the past few years was distributed: it was taken to a place as close as possible to the affected population, the able bodied members of which were then allowed to carry it back to their home settlements. The advantages of this method were outlined earlier. The food was distributed with maximum speed, the weakest members of the population were not forced to make a long and potentially fatal journey to the distribution point and people were not taken away for long periods from their subsistence activities—particularly cultivation, which is mainly the responsibility of women. But, as I also pointed out, these beneficial effects were achieved more by accident than design: had more equipment, staff and medical supplies been available it is quite likely that a 'famine camp' would have been established, aimed principally at saving the lives of children, but to which virtually the whole Mursi population might have gravitated. The principal justification for this would have been the need to ensure that the limited amount of food available found its way to those most in need of it, the assumption being that outsiders—in this case relief agency staff—are in a better position than the people themselves to decide; during times of crisis, who among them are most in need of help. This assumption is questionable both on practical and ethical grounds.

The practical problem concerns the anthropometric methods used for identifying 'at risk' individuals (weight-for-height, arm circumference-for-height, etc). Although undoubtedly very useful in the rapid assessment of the nutritional status of whole communities, these methods are crude when it comes to selecting needy individuals, unless accompanied by skilled, experienced (and therefore expensive) clinical observation.<sup>8</sup> The best demonstration of this I know of is a report by Chen and others<sup>9</sup> of an anthropometric survey of 2,019 children. Since this survey was not followed up by treatment, it was possible to ascertain, by noting how many of the children had died two years later, what proportion of at risk children would have been reached by an emergency feeding programme based upon the initial survey. If, for example, such a programme had been started with enough food to feed 500 children, and the anthropometric survey had been used to select the 500 most needy, these would have included less than

8. See J. Seaman, 'Food and Nutrition' in *Disasters*, 5, No. 8, 1981, pp. 180-8 (special issue on Medical Care in Refugee Camps).

9. L. C. Chen, A. K. M. A. Chowdhury and S. Huffman, 'Anthropometric assessment of energy protein malnutrition and subsequent risk of mortality among pre-school age children', *American Journal of Clinical Nutrition*, 30, 1980, 8, pp. 1836-44.

half of the 112 children who died within the next two years. These results, if they hold elsewhere, suggest that anthropometry is a pretty inefficient method of screening. But even if there were no such practical problems, the outsider would still not be in a better position, morally, than the people themselves, to decide who among them should be given priority in the distribution of a limited supply of food. Decisions of this kind are not based, in any community, on an objective assessment of need but on a set of generally unspoken, because taken for granted, moral values. Decisions made by agency staff will be based on values which are taken for granted in highly developed industrial societies and which may not, therefore, be entirely compatible with those which are taken for granted in the communities which are the major recipients of food aid.

Another objection that might be raised against the method of emergency food distribution which was successfully, if fortuitously, adopted by the RRC in the Mago Valley, is that it could undermine the self-reliance of the recipients. Even though the evil consequences of 'famine camps' are now widely recognised, this recognition has, it seems, persuaded governments and voluntary agencies alike that any form of 'free relief' is to be avoided. This is seen in the rush of agencies to get out of relief and into rehabilitation and in attempts to link relief, when it is given, to development projects, usually through food-for-work programmes. But, provided the method of food distribution does not draw people away from their own subsistence activities and provided, therefore, they are left to decide for themselves how it should be allocated to needy individuals, there seems no good reason to believe that they would literally down tools and make themselves dependent on handouts. This is born out by the history of Mursi response to drought over the past thirteen years. They clearly did not need to be persuaded to do the work necessary to provide for themselves by means of cultivation and if they had been fed only on condition that they did some other work (difficult as it is to imagine what, and how it might have benefited them) they would have had to give up their own subsistence activities and might, therefore, have become dependent on handouts indefinitely. A food-for-work programme could, in other words, have produced precisely the result it was intended to avoid.

The idea that 'free relief' is, in principle, a bad thing is based, I believe, not only on the widely recognised evil consequences of the 'soup kitchen' method of distribution, but also on cultural prejudice: the idea that people such as the Mursi lack the motivation and/or resourcefulness to work out new solutions to the problems of their own economic self-sufficiency. This brings me to the question of 'rehabilitation'. I use inverted commas here because I believe the word itself is dangerous. It contains the implicit assumption that the people to be 'rehabilitated' have already lost the ability to 'stand on their own feet', an assumption which is dangerous, if

only because the literature on agricultural development in the Third World is full of examples of projects which did not achieve their objectives because of a failure to appreciate both the subtlety of local knowledge and expertise and the abilities of people to adapt their social institutions to new circumstances.<sup>10</sup> It is now part of the current orthodoxy of development that schemes which do not build on local knowledge and initiative are most unlikely to succeed, but the gap between current orthodoxy and current practice is nowhere more apparent than in the agricultural settlement schemes which have become the favourite long term solution for the rehabilitation of drought affected populations in the Horn of Africa—and not least in Ethiopia. Pressure for the resettlement of the Mursi has come, in recent years, from the Wild Life Conservation Department in Addis Ababa, for which this is the only long term solution to the problem of human occupation in the Omo and Mago National Parks. Here we meet the familiar dilemma of how to reconcile what is seen as a national priority—in this case the creation of a strong, foreign exchange earning tourist industry—with the diametrically opposed interests of the local population.

The Omo National Park was set up in 1967, its headquarters being situated on the River Mui, about 30 km west of the Omo. The Mursi used both to cultivate and pasture their cattle at this spot, since it is the only place with permanent water for miles around, while every dry season they would bring their herds across from the east bank of the Omo to drink at the hot springs southeast of the present park headquarters. They now make use of the west bank of the Omo only for flood-retreat cultivation, it being the long term objective of the National Park authorities to confine them entirely to the east bank, which has been designated a 'Controlled Hunting Area'. Further still to the east is the more recently designated Mago National Park, with its headquarters on the River Neri, southwest of the administrative centre of Jinka. It takes in a large area of the Mago Valley, which has traditionally been an important source of game meat for the Mursi and their neighbours, especially during periods of hunger. And this is not all: the western border of the Mago Park runs into Mursiland proper, enclosing all the best tsetse-free dry season grazing. There is no doubt that the creation of the Omo and Mago National parks has already helped to make the economy of the Mursi less diversified and hence more vulnerable to drought. If the long term plans of the Wild Life Department to ban all agricultural and pastoral activities within the borders of both parks are realised, there will simply be no Mursi economy left—a prospect which did not seem to disturb one foreign adviser I met in 1973. Having at first refused to believe that there were any people living

10. See R. Chambers, *Rural Development: putting the last first*, (Longman, 1983), Chapter 5.

in the area at all (he had flown over it many times, he said, and seen no 'villages'), he brushed aside my objection that the livelihood of these people would be totally undermined if they were confined to a narrow wedge of territory between the Omo and the Mago Parks with the observation that the Game Wardens would need to employ a good deal of local labour!

The Omo and Mago National Parks are good examples of the arbitrary way in which national park boundaries have been drawn all over Africa, very often with total disregard for the territorial rights of local populations. Those who draw these boundaries, following such natural features as rivers and mountain ranges, are either ignorant (like the adviser just mentioned) of the fact that in doing so they are bisecting and truncating environmental resources which have been integrated into viable economic systems; or else they regard those who have built up these systems as having no right to be consulted about their possible destruction. It was this lack of consultation which the Mursi found most baffling about their exclusion from the Mui area. It was not, they said, the fact that their land was wanted by others that surprised them, but the fact that it should have been taken from them by people who 'kept their lips shut'. Apart from the injustice of this, it may well be questioned whether the creation of a 'wilderness' (a word frequently, and inappropriately, applied by wild life enthusiasts to the Lower Omo Valley) as a playground for rich, foreign tourists is a form of development in which Ethiopia, or any other African country threatened by famine, can really afford to engage. The main beneficiaries of such development are likely to be the already well off urban elite, while it is by no means self evident that endangered animal species can only be saved, in Africa of all places, by setting aside large areas from which all human occupation is excluded. African *subsistence* hunters, farmers and herders have, after all, been living with and utilising wild animals for thousands of years without exterminating them—indeed they have learnt to do precisely the opposite for the sake of their own survival. Having destroyed large parts of our own natural environment, we in the industrialized world have exported our concern to such places as Africa, declaring that areas should be set aside there where the 'rights' of animals are sacrosanct. Meanwhile, legislation to prevent the further destruction of our own countryside is consistently and successfully opposed, with little popular outcry. The national park concept has been foisted upon Africa by a guilty Europe and is irrelevant to the fundamental problems of African development.<sup>11</sup>

11. This was poignantly illustrated for me by an incident that occurred while I was at the Omo National Park Headquarters on the River Mui in April 1981. I was sitting in the Warden's office one morning, looking out through the open doorway at a group of four or five men who were standing, thin and bedraggled, in a drizzle of rain, exchanging a kind of tragicomic banter with the game guards. They were Chai, a people who speak the same language as the Mursi but who live west of the Omo and south of Maji. The Chai have probably suffered even more during the recent years of drought than the Mursi. These men were about to leave Mui after spending a few days living on food given to them by the game guards. One of them, who looked the weakest, said, only half jokingly, that if he were not given food for the journey he would be a corpse before he arrived home. Above the inside of the doorway that framed this little group, forming a kind of caption to the picture, were these words in large black letters: 'Wild life is our national asset'.

The resettlement of the Mursi has long been talked about by local administrators and I was told in 1982 that an area of agricultural land in the highlands had been set aside for such a settlement scheme. Now that the Mursi have successfully jumped the gun by their migration to the Mago, one hopes that outside intervention will be limited to facilitating and encouraging this move—by, for example, providing health and educational services for the migrants. The history of the Mago settlement is a clear demonstration that agricultural resettlement schemes *can* work, even for a people whose cultural values are overwhelmingly centred around mobile herding. But this, of course, was a scheme set up by the Mursi themselves, and therein lay the key to its success.

*The need for a new strategy*

Famine relief always, and by definition, comes too late. Despite much talk of the importance of 'early warning', it seems all too frequently to happen that the existence of a crisis is not recognised and/or responded to by donor governments and aid agencies until large numbers of people are actually dying of starvation. One reason for this may be the tendency to think of drought as a simple condition of the physical environment, rather than as a complicated relationship between the environment and the social and economic organization of a particular human group. It is, of course, easy to recognise a drought when starving people finally abandon their villages in a desperate search for food, or when a bare and arid landscape is seen strewn with the carcasses of dead cattle. But in these circumstances virtually the only possible way of organising relief is to gather people into 'famine camps' with the likely consequence of making them dependent on handouts indefinitely.

There seems to be something like a law of inertia at work here, which prevents action being taken until it is too late, no matter how much prior warning is given. It is now accepted, for example, if somewhat grudgingly, that the RRC provided donor agencies and governments with an accurate early warning of the present disaster, and an accurate estimate of the amount of food they needed in order to avert it. These predictions and estimates were treated with scepticism, it seems, because they were not presented in a scientifically 'respectable' form—the data were too 'soft'. Does this mean that all efforts should now be concentrated on improving the collection and presentation of early warning information? I think not, because the factors involved are so complex that, however detailed and 'hard' the data, they will never be such as to compel action—before, that is, the disaster hits the television screen. There is nothing quite so 'hard' as a dying child.

What is needed—and I believe this is the overriding lesson to be learnt from the Mursi and Ethiopian experience since 1974—is a system of

'information feedback' which does not rely on the subjective and inertia-producing judgement of individuals. The only way to get inertia out of a system—to make it produce the desired result ahead of time—is to have it regulate itself, cybernetically, as with a safety valve on a boiler, or a thermostat to control room temperature.<sup>12</sup> How might such a self-regulated, cybernetic system be set-up to provide food security for a people such as the Mursi? Given their traditional reliance on market exchange—particularly the direct or indirect exchange of cattle for grain—to see them through periods of hunger it would seem that a good 'sensor' (ie. conveyor of information) for such a system would be the behaviour of cattle and grain prices in local markets. An increase in the price of grain relative to cattle would be a reliable indication of present food shortage and a warning signal of impending crisis. The exchange of cattle for grain could then be so regulated, in advance, that the quantity of grain obtained, either directly or indirectly, for a given type and size of animal, was never allowed to fall below a certain amount. This would require the maintenance by the government of emergency grain stores, from which grain would be released automatically, in response to information received from the market price 'sensor'. There could be many variations on such a system, depending upon the circumstances of particular cases, but the important point is that it should have built into it, at both local and national levels, the characteristic of self regulation.

12. See A. Porter, *Cybernetics Simplified* (English Universities Press, London 1969).